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the Journal

OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

CLINTON GALLAHER, M.D., President
Oklahoma State Medical Association

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(1) Carter, S.: *M. Clin. North America* 37:315, 1953.
(2) Maltby, G. L.: *J. Maine M. A.* 48:257, 1957.
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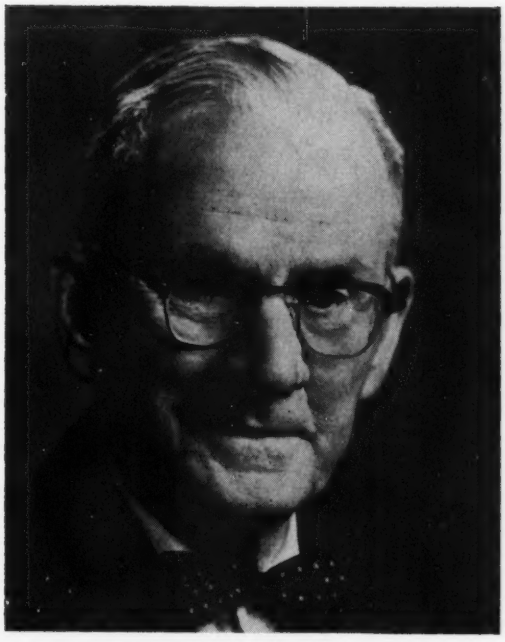
Editorials

Arcey Bee Has Gone Away*



R. C. BAKER, M.D.

At four a.m., on the morning of April 18th, Doctor R. C. Baker quietly left us. He had been a member of the medical profession for considerably more than fifty years. I have never known a physician with a greater desire to be of service to his profession, than was Doctor Baker.

He loved his country—throughout most of his adult life, Doctor Baker had been a member of the military. He first entered service in World War I. Following this he returned home and organized the medical detachment of the 189 F.A., of the 45th Division. He spent many years in the training of his men. As a result, when the division was called into active duty in World War II, no segment of this illustrious organization was more alert and ready than was this medical unit.

He loved the medical profession. More than twenty years ago, Doctor Baker was elected president of the Garfield County Society. He showed up at the first meeting with a sheath of papers under his arm, and passed out a sheet to each of those present. This was the first edition of the Bulletin, which he had typed and mimeographed by hand. His unusual sense of humor caught the fancy of those who received a sheet and he was urged to continue. This he did and as the years passed by the Bulletin became bigger and better. It developed into a regular publication, beautifully done and mailed out to more than twelve hundred people each month. Doctor Baker loved it; it was entirely the product of his own efforts.

He had a little different philosophy concerning this publication than most editors have. He did not intend that it be primarily a scientific journal; there were many others which covered full and well this field. He preferred the lighter vein, enjoyed a good joke. Many times he said, "You can get a lot of laughs out of life, if you can listen and not get mad." He often told me that if he could not say anything good about an individual, he preferred to remain silent—he was content to allow others to throw the brick bats.

Doctor Baker was really a fine, wholesome and good man—dedicated, friendly and happy. He laid no claim to being a giant in medicine, but those of us who knew him best will remember his unselfishness and his desire to be of service in the interest of those forces which he admired.—*W. P. Neilson, M.D.*

**The Bulletin of the Garfield-Kingfisher County Medical Society was started by R. C. Baker, M.D., with his induction into the presidency of the society. It was developed by Doctor Baker into one of the best county journals published and was edited by him until his death on April 18th.* The Journal, *in recognizing his accomplishment in this field of journalism, asked a colleague and long-time friend, Doctor W. P. Neilson, to comment on Doctor Baker's many contributions.*

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Curriculum Changes in the School of Medicine

The faculty of the School of Medicine approved changes in the curriculum to begin with the 1961-62 school year which are designed to improve the student's situation for learning, to approach more nearly the concept of graduate school experience, and permit the student time to explore in more depth those areas of interest to him. The high school and college students stereotype of the student in medical school needs to be changed from that of a student weighed down with unending hours of study and memorization, working to get things behind him, to that of a student who is excited about what he is doing and learning and anxious to get on with learning more and more.

The faculty considered the most essential ingredient of a curriculum to effect this change to be more time for reflection and appreciable time for electives. Without sacrificing necessary elements in medical education, this could only be done by lengthening the school year. The fourth year is, at present, 45 weeks. This remains unchanged, but year I is increased from 34 to 36 weeks and years II and III to 40 weeks. An additional economy of time is the placing of the final examination in a course in a regular class period. This saves a week twice each year which had previously been set aside for final examinations.

The number of applicants for medical schools has steadily dropped off. When this began, it was considered to be due to the low birth rate of the depression of the 30's. This doesn't explain the situation now. Industry is bidding for the scientifically inclined student. A ready job with good pay in a much shorter period of time is attractive. The hassel between medicine and government over socialization has had its effect. Readily available scholarships in other fields find eager takers.

The faculty believes that the curriculum change reflects a change in concept of medical education which may keep at home some of the fine students who would otherwise go to some out of state medical school. The home town physician can do much to help a student make up his mind about medicine as a career and to select our medical school. He has four stumbling blocks or wind mills to lay low:

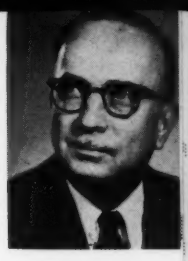
1. A system is important to him, but he has every reason to believe that a life of service or teaching in medicine is an unbelievably rewarding one, regardless of the system.

2. Given a fine medical school like the University of Oklahoma, the product of the school will be determined by the quality of the student. In other words, a good student is going to come out of our university as well educated as he would come out of any other. There is no reason to advise a bright boy from one's home town to go some place else.

3. While change does not necessarily mean progress or improvement, the changes that are being made in our curriculum are the result of studies and experiments in medical education all over the country. It is difficult for the physician to believe that how it was done in his day and the teachers he had could be improved upon. No one questions the quality of both in that day. This is another day and improvements are occurring in medicine and medical education as they are in everything else.

4. It is difficult to differentiate between what is education and what is training. Much of the medical school work of physicians, who finished a number of years ago, was devoted to training and not to education. Medical educators now consider training a function of post doctoral years. Do not, therefore, be disturbed by the fact that students of today are not learning techniques that you were taught. They are instead getting a superb background on which to build in their internships and their residencies. One could not ask for any more.

In discussing medicine and medical schools with interested high school and college students, one should be positive and leave out the *buts*. After all, there are few of us who would change.



PRESIDENT'S LETTER

INAUGURAL ADDRESS

May 8, 1961

Thank you, Doctor Brown.

Members of the Oklahoma State Medical Association, members of the Woman's Auxiliary and Honored Guests: I accept the assignment.

I want to congratulate Doctor Walter E. Brown upon his most effective and successful leadership during the year 1960-61, and the House of Delegates for having elected him to the office of President. He has made a challenging pattern for his successor.

I wish to congratulate Mrs. Virgil Ray Forester and the Auxiliary for a most progressive and useful year of hard work. It was unusually pleasant to visit with the members of the Woman's Auxiliary this morning.

I congratulate Doctor Wendell Smith and the Tulsa County Medical Society for the planning and conduct of this 55th Annual Meeting. I would like further to express great satisfaction for having been invited to enjoy with them the visit of Doctor Edward R. Annis a few days ago. It might well be considered a worthy project for us to encourage the debate between Doctor Annis and Mr. Abraham Ribicoff, Secretary of Health, Education and Welfare. However, I do not expect it. It seems unlikely that anyone who apparently has the intelligence of Mr. Ribicoff would dare enter into a public discussion with Doctor Annis.

Doctor Annis gave me a great encouragement when he declared in effect "the fact that the members of an organization elevate one to a position of honor does not necessarily indicate that he is a good speaker, or that he knows anything about debate."

It is now proposed that all members of the OSMA shall reaffirm their desire to continue improvement of the care of the sick, of all ages, regardless of ability to pay. The method shall bear reference to five particular areas of activity.

I. A member of the OSMA shall be available in every high school in Oklahoma for the purpose of talking with and advising students who are, or may become interested in Medicine as a career.

II. Further provision shall be made available for the economic comfort of Medical School undergraduates.

III. The system of medical-law-indoctination of all candidates for license, by examination or by reciprocity, shall become a joint activity of the OSMA and the State Board of Medical Examiners.

IV. The formal program of indoctrination for all new members of the OSMA shall become a part of the policy in each component unit. Reference should be made to include orientation in various activities, such as religious, charity, civic, political activities and the recognition of obligation to the profession as such. The Oklahoma County Medical Society program is a good example.

V. The programs of postgraduate professional training should be extended.

As an individual I promise to be available and to help in any way I can. I am impressed with the scope of activities and my own limited abilities. I am more impressed and pleased with the fact that thus far in organizing the various committees and councils, the response has been most cordial. Because of your willingness to continue and extend participation I do now confidently expect the year 1961-62 to be a rewarding and useful experience for all of us.

I further promise that—in so far as it may be possible—due regard shall be given to the value of your time and the conservation of your energies, so that you may continue more effectively in the major project—the Practice of Medicine.

Clinton Gallaher M. D.
President

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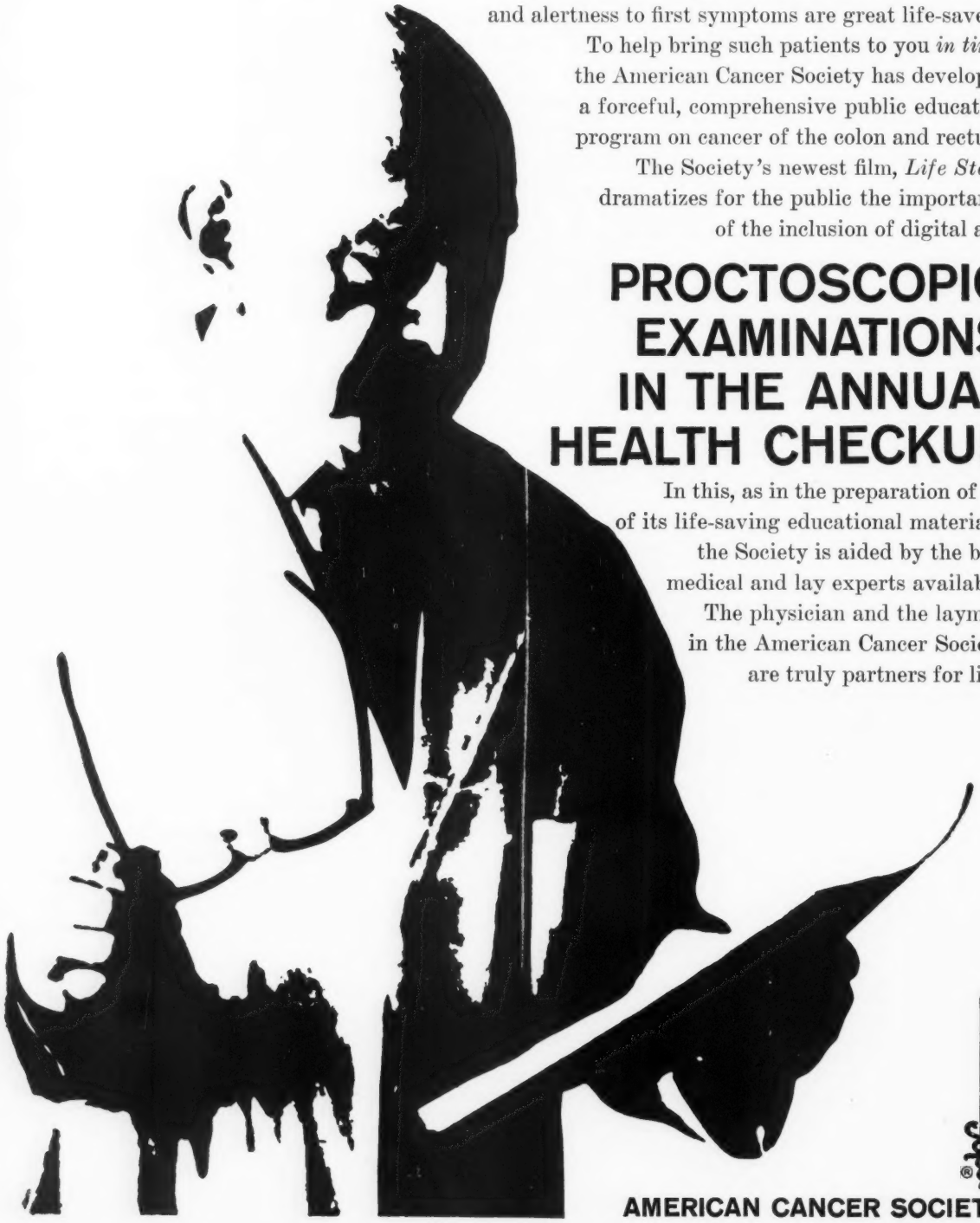
In 1961, you, the nation's physicians, will diagnose an estimated 70,000 cases of cancer of the colon and rectum. Although potentially this is a highly curable cancer, each year more than two thirds of such patients die of the disease. Thousands are lost needlessly. They could be saved by proper medical treatment of the disease, found by annual examination, in its presymptomatic and most curable stage. The regular health checkup and alertness to first symptoms are great life-savers.

To help bring such patients to you *in time*, the American Cancer Society has developed a forceful, comprehensive public education program on cancer of the colon and rectum.

The Society's newest film, *Life Story* dramatizes for the public the importance of the inclusion of digital and

PROCTOSCOPIC EXAMINATIONS IN THE ANNUAL HEALTH CHECKUP.

In this, as in the preparation of all of its life-saving educational materials, the Society is aided by the best medical and lay experts available. The physician and the layman in the American Cancer Society are truly partners for life.



AMERICAN CANCER SOCIETY

Scientific Articles

The ideal therapy in patients with renal artery stenosis and hypertension is salvage of the kidney and reduction of hypertension by renal revascularization.

Renal Artery Stenosis With Hypertension*

Case Report of Successful Surgical Treatment

J. M. INGALLS, M.D.
DAVID D. SNYDER, M.D.
GILBERT S. CAMPBELL, M.D.

Jerry M. Ingalls, M.D., who graduated from Duke University School of Medicine in 1958, is now taking a residency in General Surgery at the University of Oklahoma School of Medicine.

A graduate of George Washington University School of Medicine in 1956, David Deal Snyder, M.D., is now Senior Resident in Surgery at the University of Oklahoma School of Medicine.

Gilbert S. Campbell, M.D., who graduated from the University of Virginia School of Medicine in 1946, has been certified by the American Board of Surgery and the American Board of Thoracic Surgery. He is now Professor of Surgery at the University of Oklahoma School of Medicine.

Doctor Campbell holds memberships in the American Surgical Association, the Society of University Surgeons, the American Association for Thoracic Surgery and the American Physiological Society.

GOLDBLATT'S STUDIES on the production of experimental hypertension by means of renal ischemia aroused clinical interest in hypertension of renal vascular origin.[1] Many patients with hypertension and unilateral renal disease underwent nephrectomy, but the results were unpredictable and unsatisfactory. More recently, with the development of angiographic techniques for studying the renal arteries, hypertensive patients with renal artery occlusive disease can be subjected to operation with predictable and satisfactory results.[2]

Obstructive lesions of the renal artery or its major branches are probably the most common remediable cause of hypertension, surpassing pheochromocytoma, coarctation of the aorta, Cushing's Syndrome or primary hyperaldosteroism. In 1959 Poutasse[3] reported that of 337 hypertensive patients selected for renal arteriography, 87 (26 per cent) were found to have occlusive disease of one or both renal arteries and thus could be considered for surgical therapy.

*From Department of Surgery, VA Hospital and University of Oklahoma Medical Center, Oklahoma City.

Case Report: R.L.M.

The patient, a 38-year-old white male, was admitted to Oklahoma City, Oklahoma Veterans Administration Hospital with a chief complaint of shortness of breath,

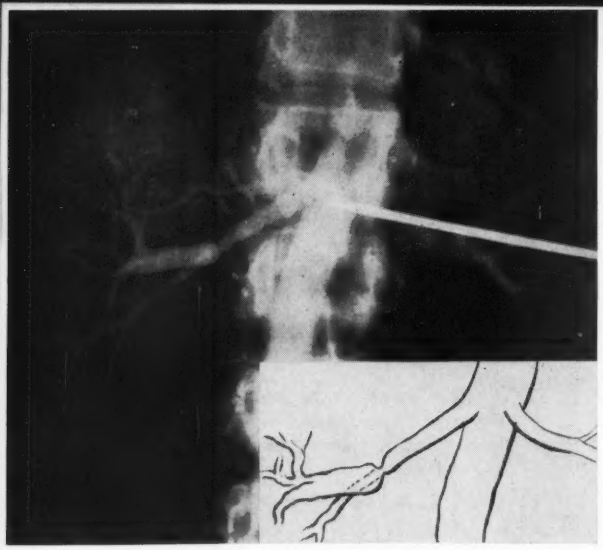


FIGURE 1

dyspnea on exertion, and paroxysmal nocturnal dyspnea for five months prior to his admission. Two months prior to this admission, the patient had experienced an episode of chest pain which lasted for approximately six days. One month prior to admission, the patient noted the onset of two pillow orthopnea with palpitation and occasional early morning throbbing headache with nausea. Accompanying this for several months prior to admission, he had noted paroxysms of increased nervousness, sweating, and flushing. The patient had noted no episodes of pedal edema, nor did he have any history of urinary tract infection. Past history is remarkable for the presence of hypertension, known for nine years prior to this admission. It should be emphasized that there was no previous history of renal disease. On physical examination, pertinent findings were: blood pressure in the right arm 190/130, left arm 174/110, left leg reported as 240/140 with a pulse rate of 100 per minute. Funduscopic examination revealed narrowing of the arterioles with minimal spasm. Examination of the heart revealed a prominent PMI in the left fifth intercostal space at the anterior axillary line. Sinus tachycardia was present but no murmurs were audible. All peripheral pulses were palpable and equal bilaterally. The lungs were clear. Examination of the abdomen revealed no palpable masses, organs, hernia, fluid, tenderness, or rebound. Examination of the extremities revealed no edema, cyanosis, clubbing, or malfunction. Laboratory data revealed a normal CBC and UA. PSP and creatinine clearance and concentration tests were within normal limits. Bilateral (split) renal excretion studies* showed a total sodium of 59 mEq/liter and a urine volume of 28 cc from the right kidney. The left kidney excreted a total sodium of 270 mEq/liter and a urine volume of 245 cc. Urine culture was negative. Indolacetic Acid, cold pressor, regitine and histamine tests revealed no abnormality. BUN was 30 mgm.%, total proteins 6.9 grams % with an albumin of 4.3 grams %.

PA and lateral of chest revealed the heart to be moderately enlarged in its transverse diameter with a left ventricular prominence. EKG showed left ventricular hypertrophy. IVP revealed both renal shadows to appear normal in size and position. Five minutes after IV administration of the contrast media, there was bilateral excretory function. A translumbar aortogram demonstrated a thin band-like constriction of the right renal artery 4 cm. from its aortic origin (figure 1). This band-like constriction was noted to narrow the artery to less than one-half of its lumen. A post-stenotic dilatation of the superior branch of the renal artery was present. The left renal artery appeared normal. The more distal aorta and iliacs opacified and appeared of normal caliber. Operative correction was recommended. Operation confirmed the x-ray diagnosis of a narrow constrictive band at the bifurcation of the right renal artery. The renal artery appeared normal both proximal and distal to the occlusion. The artery was incised longitudinally at the constricted area and a dacron patch graft was inserted. At the time of operation direct pressure measurements showed the pulse pressure in the right renal artery proximal to the constriction to be 25-40 mm. of mercury. Distal to this constriction, pulse pressure was 0-10 mm. mercury and after correction, the pulse pressure distally was 25-35 mm. mercury (see figure 2). Following the surgical procedure, the patient's blood pressure fell to an average of 140/90 mm. of mercury with remission of hypertensive symptoms. Postoperatively, an aortogram revealed a small amount of

*Performed by B. J. Limes, M.D., Department of Urology.

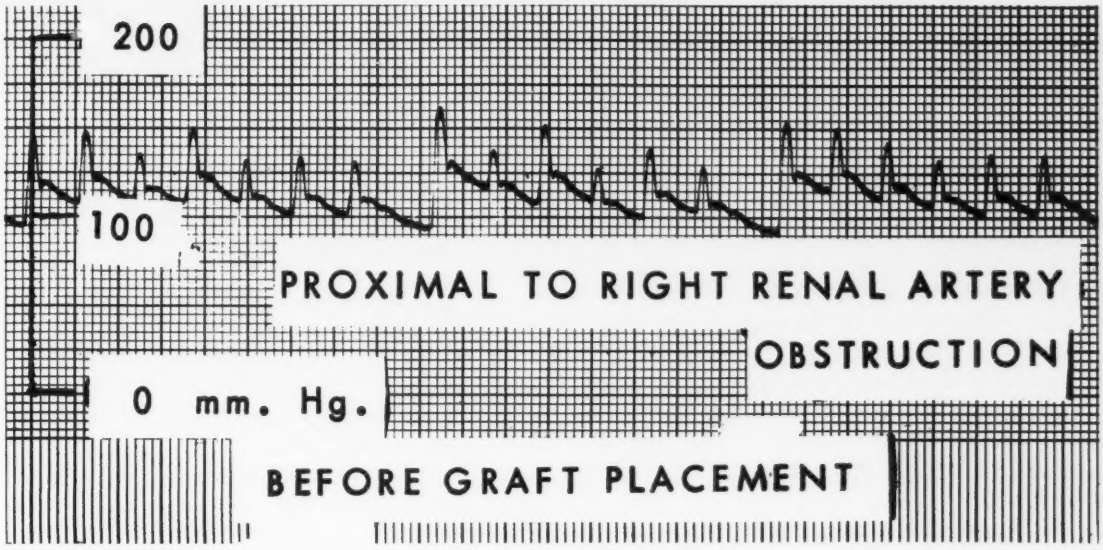


FIGURE 2-A

contrast media opacifying both renal arteries and their branches. No post-stenotic dilation was present and the site of the constriction was now noted to be of normal width.

Discussion

The ideal therapy of renal artery stenosis is preservation of renal tissue and reduction of hypertension by means of renal revascularization. With the onset of the renal artery occlusion there is a fall in the arterial pulse pressure in the ischemic kidney. This is thought to cause release of the proteolytic

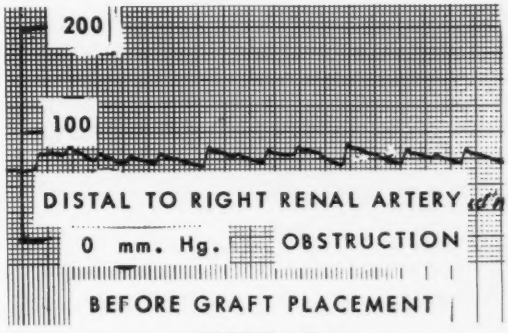


FIGURE 2-B

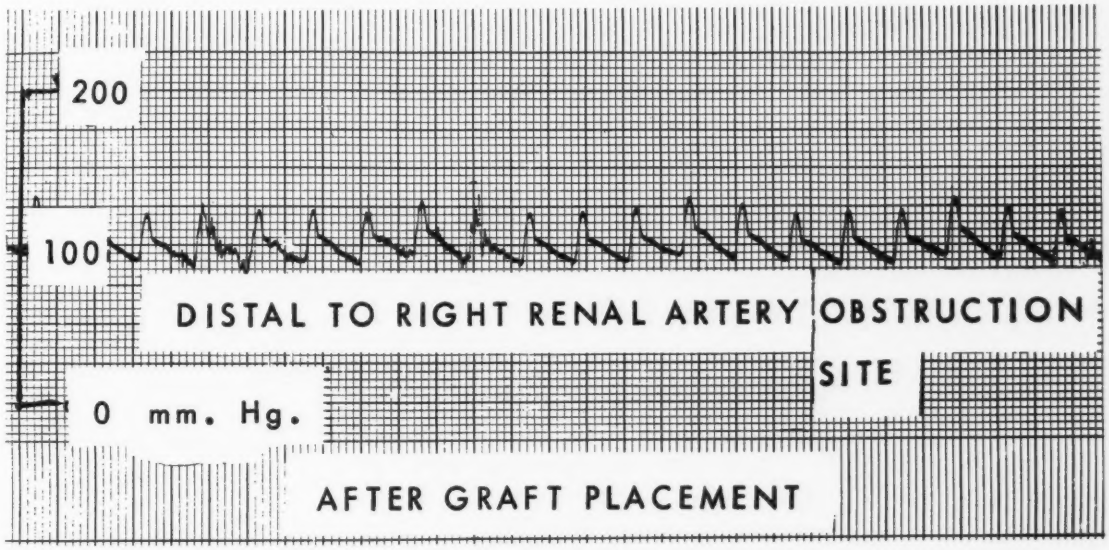


FIGURE 2-C

enzyme, renin, from the ischemic kidney. Renin acts on a protein substrate in the liver, causing the conversion of this decapeptide into an octapeptide (angiotensin) which is the active vasopressor substance. Due to the protective function of the arterial occlusion initiating the above process, the arterial bed of the kidney on the obstructed side is protected from the increased pressure. The unobstructed kidney, subjected to hypertensive pressures, develops renal vascular changes and functional impairment. Hence, by means of revascularization, hypertension is corrected, as blood flow to the "protected" renal parenchyma is restored. Therefore after a successful renal revascularization procedure the patient has regained maximal use of the more normal kidney.

The surgical procedures utilized in revascularization are numerous and each still possesses its proponents and opponents. The methods utilized are (1) bypass graft with synthetic material, (2) insertion of patch graft at the point of stenosis, (3) endarterectomy, (4) autograft, e.g., by use of splenic artery with an end-to-end or end-to-side anastomosis to the renal artery distal to point of stricture.

Due to the nature and location of this lesion we inserted a patch graft at the site of stenosis.

Certain points in a patient's history are suggestive of renal artery stenosis[3, 4] and these may be listed as follows:

1. Hypertension under age of 35.
2. Moderate hypertension which suddenly gets worse.
3. Malignant hypertension in a patient 55 years or older.
4. Nonfamilial hypertension of recent origin with rapid progression into the malignant phase.
5. Hypertension which develops or becomes worse following an attack of flank pain—which may represent a renal infarction.
6. Disparity in size or excretory function of IVP—a difference of 1 cm or more in the long axis of the two kidneys may represent renal atrophy; a lag in appearance of the radiographic media especially in the five minute film indicates a difference in excretory function.

Summary and Conclusions

1. Occlusive disease of the renal artery or its major branches is the most frequent cause of remediable renal hypertension.
2. The ideal therapy in patients with renal artery stenosis is salvage of the kidney and reduction of hypertension by renal revascularization.
3. By means of renal arteriography an absolute diagnosis of hypertension from renal artery stenosis can be made.

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J. M. Ingalls, M.D.
800 N.E. 13th, Oklahoma City, Oklahoma

An appraisal by a seasoned and sincere thinker. Read it aloud.

Congenital Malformations; A Medical and Social Challenge*

JAMES L. WILSON, M.D.

A graduate of Harvard, the author is Chairman of the Department of Pediatrics and Communicable Diseases at the University of Michigan. He is a member of the American Pediatric Society, the Society for Pediatric Research (Emeritus) and the American Academy of Pediatrics.

THE IMPORTANCE of congenital anomalies in the practice of everyday medicine is increasing. The reasons for our increasing attention to them are easy to see. One is an increasing demand by the public that we help them with any complaint. The well advertised advances in medicine and surgery in every popular magazine does and should make our people more demanding. It brings hope to people who previously would have had no idea that anything could be done to correct or prevent their tragedies, often more hope than is at all justifiable, but with this hope a challenge that a physician cannot ignore. Another reason for our present emphasis on the importance of birth defects is the great reduction in mortality and morbidity of other diseases, most importantly, infections and nutritional diseases. The most encouraging and happy reason for the increased attention to this phase is the great advances in therapy, of which the most dramatic, though not most fundamental, are surgical.

In our increased interest in these problems of birth defects, one apparently logical step is first to determine how many congenital anomalies there are, how frequent they are on some familiar statistical basis. This is very difficult to do and efforts to be complete and accurate would be bound to be futile. We have first to define congenital anomalies and if we do it broadly enough we could easily say that no one of us is here who does not have a congenital anomaly. We can go further and philosophize that the different reactions to disease, the varying susceptibility to disease which we see in such a puzzling way in our patients, where one is damaged and one is undamaged by a similar illness, may be due to congenital variations in "constitution," whatever that is. Noxious influences during intrauterine life influencing chromosomal developmental status may importantly influence our responses to disease. We will be hard put to it to quantitate congenital defects so broadly defined.

We can determine the incidence of congenital malformations that are grossly handicapping, but here again we would have to depend upon pretty arbitrary definitions and often we would have to wait for some years before we could be sure that some of the more subtle but very important diseases of congenital origin, present at birth, do not exist.

In the past, both physicians and medical lay people have looked on diseases of congenital or genetic origin on the one hand, and of postnatal origin on the other, as distinct categories of human ills. The concept of a newborn baby with a gross anatomical abnormality as a "monster," an act of God beyond our control or understanding has dominated our thinking about all diseases not acquired after birth or clearly at the time of birth.

*Presented at the Symposium on Congenital Malformations, January 25 and 26, 1961 at the University of Oklahoma Medical Center.

As you have heard from several points of view today, we must all rearrange our ideas and think of our human kind from before conception as an ovum or sperm, to old age, as being subject to pathologic influences which may result in what we can recognize sooner or later as disease, and can only wonder that it seems so seldom to happen.

Acquired disease in intrauterine life has been beyond our ability to examine, to diagnose, or to detect, until the moment of birth. This handicap still exists. The concept that the chromosome itself may be changed by pathologic effects, even temporarily, is a new one. The concept that intrauterine disease itself is often a complex of some noxious influence on a genetically susceptible individual, is a relatively new one. The old idea of prenatal emotional influences, such as the effect on the fetus of the mother being shocked by a snake, has long been abandoned, but in a way we may have to come around to a modified conception of this again and consider that any experience in the mother that would affect her chemical or hormone equilibrium, might conceivably influence the development of the fetus at certain critical stages in its development.

The concept of a congenital, "born with," abnormality as being only an anatomical defect has to be broadened, and we find we are even more interested in inborn defects of the enzymes and in so-called molecular disease, subtle changes in the body's control of metabolism which are just as truly congenital as a hare lip or a meningocele, and surely as truly a defect.

There are almost fifty abnormalities of the kidney which may be present at birth, overlapping in their characteristics but involving minute defects of various types of kidney function. Except for classifying and reclassifying them with men's names attached to them as clinical entities we haven't made much progress, either in prevention or in correction. We could go on and list scores of recognized chemical congenital abnormalities which cry out for remedial effects but there is little point of it. Our textbooks of pediatrics are becoming more and more occupied with the delineation of these conditions, mostly on the basis of clinical descriptions.

Another condition, glycogen storage disease, is a good illustration of a condition which surely should be identified as a specific enzyme defect, where sugar is deposited in the liver as glycogen but cannot be remobilized. We can help these patients, some quite a lot, but again, we are not near the exact delineation of the problem to say nothing of correcting it.

It would be impossible to take time or space to list here all the progress in prevention and treatment of various types of congenital anomalies. For the most part, advances in medical science in prevention still lie entirely ahead of us. In treatment we can take pride in many effective steps, though we can mention only a few, the most dramatic being surgical. The correction of tracheo-esophageal fistula and esophageal obstruction will certainly be remembered as one of the great triumphs of thoracic surgery in infants which really led towards other even more dramatic procedures, now routine in open heart surgery. These are now well known but it would have seemed almost unbelievable only a few years ago.

In purely medical areas we have less to admire. We must remember the congenital chemical abnormalities that face us which are crying for help and will almost certainly be remediable at some time. Cystic fibrosis of the pancreas is now almost the commonest cause of chronic lung disease in small children. A few years ago it was not even known, was entirely lost amongst the far greater number of chronic suppurative lungs from pyogenic infections. We have learned to do much for the nutritional care of these children and some for their lung conditions, but we have not begun to approach the fundamental condition which is something related to the abnormal function of the exocrine glands.

Several medical experiences have led us to think that we might detect many preventable causes of intrauterine disease which lead to malformations and thus take effective action against them. Two rather exciting and promising incidences are (1) the natural human experiment first reported

from Australia of the ill effect of German measles in the mother on her fetus, and the other (2) the great number of experiments on animals in which the pregnant beast is subjected to various annoying influences, generally through dietary deprivation, with the result that predictable abnormalities in the offspring can be obtained which are similar to human congenital defects.

Both these experiences have encouraged us to think that we can find another "German measles," a virus infection, or a nutritional defect, perhaps trivial in its affect on the mother but devastating to the fetus, that we could prevent. So far we have been disappointed, though we have by no means exhausted further study, and it still seems unlikely that German measles, alone of the scores of identifiable pathogenic viruses, is the only one that can just nicely escape killing the fetus and yet critically damage it at a crucial time in its development. At this moment we are left with no practical steps to prevent any such effects, if they exist, except those of German measles.

The studies of experimental teratology in animals have made us believe that nutritional defects in the mother, which might be preventable, could explain some of the abnormalities. In the acute human experiments in the areas of nutritional deprivation during the German occupation in Europe, instead of finding an increase in congenital anomalies, we simply find a decrease in fertility and birth rate. We are in a way disappointed that we cannot find that severe or mild nutritional defects, deprivation of certain vitamins or amino acids, which in experimental animals lead to congenital anomalies similar to those that so concern us in our children, do not clearly cause such human diseases so that we could prevent them. But again, this field of research has not been exhausted and still we may learn something that we as physicians can do something about.

Sometimes real advances in medical care and knowledge of pathogenesis of disease are hard to apply effectively for direct patient aid, even though they are not very expensive. There are certain public health procedures in prevention of mental defects of congenital origin that we could carry out more extensively with more organization. I will mention three diseases which we cannot prevent but whose ill effects on the development of the brain we can prevent with early diagnosis.

One is the fascinating "molecular disease," if you please, phenylketonuria, which results in an important, though small, per cent of our mentally defective individuals in the country. Here is a disease which, if diagnosed at birth or soon afterwards, can be so treated that the mental defect, which seems the important ill result, can be prevented. The diagnosis depends upon a five cent, as it were, laboratory test, but one that must be carried out at the right time and for 10,000 individuals in order for us to detect one case to treat.

Our old acquaintance, cretinism, is another example. Here again we have an important cause of mental deficiency. We believe that if it is diagnosed very early the mental deficiency can be prevented, at least we are sure it will not be as bad. How can we diagnose it very early? Actually, if we could carry out a ten dollar laboratory test on the blood of every baby, a month or so after birth, we could prevent much of the mental deficiency from this cause. Since we can't do that, if we carried it out on every baby about which we had any worry whatsoever, conceivably we could eliminate or enormously reduce the results of mental deficiency due to this defect.

A third one, galactosuria, which has other ill effects than on the brain, can also be prevented if a simple urine analysis, done early in life and properly interpreted, can be followed by a preventive dietary regime.

We must expect that the greater attention to congenital malformations in the practice of medicine will have an affect on our whole medical economy. Increased cost of medical care results from incomplete corrections of abnormalities, from incomplete cures, if you please. A few years ago our sick infant wards were filled for the most part with infections, or diarrheal disease of uncertain etiology. Now, quite different conditions busy us. Even a common city hospital with no special referrals of complex problems, may have 50% of its sick infants there be-

cause of congenital abnormalities, and in a referral teaching hospital this may go as high as 90%. Whatever data may be collected, there is no question but the problems of birth defects will increasingly dominate the list of unsolved medical problems and will equal cancer and degenerative diseases in importance.

We might compare the affect on total medical economy of diseases with different possibilities of correction. The hare lip and cleft palate, for instance, a traditional and well known defect, is nearly completely corrected at the time of the specific surgery indicated. Of course, if it isn't done at the right time there may be further medical problems and there are always some psychological and speech training problems, but as a whole these patients are pretty successfully handled once and for all, and are not great additional burdens on us after the corrective procedure has been applied.

On the other hand, let us study the marvelous attempts at repair work that we are now undertaking in cardiac surgery, and its affect on total medical care. We are intensely proud of these advances in medicine. However, often we are simply converting one congenital anomaly into another, even though a less incapacitating one; and the worry about follow-up care, of secondary endocarditis, of mid-aged myocardial failure, is still unresolved. Often even the efficiency of the heart is not completely returned to normal and only some improvement is made which prolongs a life, inevitably demanding more and more medical care.

We are certainly impressed by the same problem in the correction of hydrocephalus and the various forms of myelodysplasia. We are pleased, but not satisfied by the advances made in the prevention of progressive hydrocephalus. Here we often may be saving a life, one still to be burdened with medical problems, one which a few years ago would have soon ended in death and at that time ended the medical problems.

We can foresee progress in remedial treatment for many other gross anomalies, but we do not foresee in pediatric hospitals any great reduction in the number of necessary hospital beds, and we can well see that further advances in therapeutic medicine will paradoxically increase rather than diminish the amount of medical care that will later be necessary. Every life saved, besides being a medical triumph may well be a persistent medical problem, perhaps of maximum severity.

An additional problem, well illustrated in hydrocephalus but found in other conditions, is that in our eagerness to save intelligence and life, to carry out rather elaborate corrective procedures early, we may carry them out unnecessarily. The determination of progressing hydrocephalus is not always easy, especially early in its course, and already we are seeing unnecessary and harmful procedures carried out because of a false conception of the indications for radical surgery. Our knowledge of the variation from normal in the size of the head and the details of the characteristics of increasing macrocephalus is absolutely essential for good medical care. The correct diagnosis may be more difficult than the surgical procedure indicated.

The cost to the public and to the individual of survival with a brain deficiency needs no discussion. We can well consider such a phrase as the "risk of medical care." In a country, however, where we will not accept the idea of active euthanasia, we will equally well object to passive euthanasia where we sit in judgment and deny a remedial program to an individual because we expect the individual will still be grossly handicapped.

It is interesting to contemplate the overlapping effects of basic research directed toward one end, on the understanding of secondary, but just as important, ends. The vast study of the nature of viruses, accelerated by tissue culture techniques and directed toward the prevention of poliomyelitis, has even more importantly increased our knowledge of genetics, of molecular abnormalities, and thus of congenital defects. Thus, many of the activities supported for the understanding and prevention of poliomyelitis could be equally well justified for the prevention of cancer and birth defects.

Department of Pediatrics
University of Michigan, Ann Arbor, Michigan

Do carcinoma of the larynx and bronchogenic carcinoma have common etiologies? If so, why are they not seen more often in the same patient simultaneously?

Concurrent or Subsequent Carcinoma of the Larynx and Bronchus

ROBERT B. BROWNELL, M.D.

Robert B. Brownell, M.D., graduated from Southwestern Medical School in 1957 and is now serving a third year residency in Otolaryngology at the University of Oklahoma School of Medicine.

THE PURPOSE of this paper is to call attention to the occurrence of multiple primary carcinomas, with emphasis on primary carcinoma of the larynx and bronchus, to enumerate the modes of diagnosis and treatment, and to state briefly the rationale for therapy.

The day has now passed when a clinician can become excited about diagnosing the existence of multiple primary carcinomas. Gone is the concept that these are biologic accidents or medical curiosities. Since Billroth described the first cases of multiple primary malignant tumors in 1879, other clinicians have added data to the literature indicating that these are by no means rarities. Although Billroth's description of multiple primary malignant tumors as involving separate organs, being of different histologic types, and each producing its own metastases, was too strict, we now have a more liberal and realistic acceptance of such cases, proving that their incidence is much greater than formerly thought. On the basis of American statistics obtained from autopsy material, the frequency of multiple malignancy in cancer cases is 3.9%; it is felt by most investigators that this is a conservative figure. Multiple malignant tumore occur more frequently than can be explained on the basis of chance. In fact, in their series, Warren and Gates felt that the chances of a person developing a second malignant primary carcinoma, were eleven times greater than for a cancer-free individual to develop his first primary malignant carcinoma. This may be explained by a predisposition or susceptibility to cancer in certain persons, or the action of some factor favoring the development of malignancy. It was also shown that multiple cancers occur at the same age as single cancers.

Multiple tumors of the respiratory tract are uncommon with the exception of benign papillomas which may undergo malignant changes. This contrasts with the frequent occurrence of multiple urinary tract and alimentary tract neoplasms. However, Lewis and Schaff report 12 cases of carcinoma of the larynx with co-existing or subsequent carcinoma of the lung between the years 1950 and 1955. In one patient who had been treated by irradiation, an adenocarcinoma of the left upper lobe bronchus was found 17 years later by chest x-ray and bronchoscopy with biopsy. Pneumonectomy was performed and the patient recovered. Another case

of a white male with chronic cough for 20 years was described in which a chest film showed an infiltrative lesion in the left upper lobe. Endoscopy disclosed a Grade III squamous cell carcinoma of the larynx and thoracotomy disclosed a transitional type carcinoma of the left upper lobe with mediastinal involvement. This illustrates the simultaneous occurrence of malignant tumor in the two sites under discussion, being of different histologic types.

Thompson and Schaff reviewed a series of 20 cases of carcinoma of the larynx which came to autopsy. Five of the patients were found to have developed concurrent or subsequent carcinoma of the bronchus. These were white men, ages 52 to 73 years, and all were cigarette smokers. In three of the cases, the bronchogenic carcinoma was diagnosed concurrently or within a short time of the laryngeal carcinoma. In one case, the laryngeal tumor preceded the bronchial tumor by seven months; in another by seven years. In all these cases, multiple visceral metastases were discovered.

Two cases of associated laryngeal and bronchial carcinoma treated at the Oklahoma City Veteran's Administration Hospital and at Wesley Hospital are presented:

J.B.W., a 51-year-old white male, was admitted in September, 1958, with complaints of hoarseness and dysphagia. A biopsy of a lesion involving the right true and false cords showed Grade II squamous cell carcinoma. A total laryngectomy and right radical neck dissection was performed. The postoperative course was uneventful and the patient developed an excellent esophageal speech. He was re-admitted exactly one year later complaining of cough, blood streaked sputum and right chest pain relieved by narcotics. Bronchoscopy failed to demonstrate a lesion, but culture of bronchial washings grew Pseudomonas aeruginosa and cytology was reported as showing atypical cells, questionably malignant. Roentgenograms of the chest demonstrated an oval infiltrate in the periphery of the upper half of the right lung. This was interpreted as being an inflammatory process with moderate atelectasis. On subsequent films, this process seemed to be resolving somewhat. Throughout the admission there was no hemoptysis, the cough was controlled with elixir of terpin hydrate, and the chest pain disappeared. However, on using esophageal speech, the patient complained of nausea and developed some pallor of the skin. On the thirty-sixth hospital day, at 1:25 a.m., he was heard suctioning himself and was found having a massive hemorrhage from his tracheal stoma. He expired immediately. Postmortem examination revealed a small primary carcinoma of the upper surface of the right main-stem bronchus. There was massive metastasis of the bronchogenic carcinoma to the pancreas, adrenals, liver and heart.

T.R.S., a 67-year-old white male was referred to the Oklahoma City Clinic in July, 1959, with a five-month history of sore throat. Direct laryngoscopy and biopsy revealed a 3 cm. x 4 cm. ulcerated mass in the posterior laryngopharynx, which was a squamous cell carcinoma. Laryngeal crepitus was absent and a small, non-tender lymph node was palpated in the left carotid triangle. A routine film of the chest demonstrated an infiltrating process from just below the right hilum to the base. Bronchial washings taken at bronchoscopy revealed clusters of anaplastic epithelial cells. On July 28, 1959, a right thoracotomy was performed. A 2 x 3 x 4 cm. mottled mass was attached to the posterior surface of the right main stem bronchus. Several hilar nodes appeared enlarged. Pathologic report showed Grade II carcinoma of the bronchus, infiltrative. The patient expired on the fourth post-operative day, due to myocardial infarction. In this case, the two carcinomas were diagnosed concurrently, and the more serious one received the first surgical attack. Unfortunately, the patient expired from unrelated causes before the second lesion could be treated.

Since carcinoma of the larynx rarely metastasizes below the clavicles, the onset of pulmonary symptoms or the appearance of asymptomatic x-ray shadow with the configuration of bronchogenic carcinoma should be followed with careful and complete clinical and laboratory examination. A complete history of the patient should include contact with inhalant irritants including smoking and a family history of malignant tumors.

Physical examination may be unrewarding until cough and hemoptysis direct the attention to a bronchogenic carcinoma.

Roentgenograms of the chest are invaluable and should be obtained at six months intervals as part of the follow-up examination. They frequently point to a suspicious lesion before it can produce symptoms, thus increasing the likelihood of resectability. The presence of a typical shadow with atelectasis of one or more segments suggests the presence of primary tumor rather than metastasis. Comparing current films may be an aid in diagnosing an unrecognized shadow. Also chest tomograms may reveal bronchial changes if atelectasis has not yet occurred. Bronchoscopy with biopsy or aspiration of secretions for examination by the Papanicolaou method, may reveal the nature of the tumor in certain cases. Exfoliative cytology, however, gives very little information in metastatic lung lesions as the material is quite scanty. Then, open thoracotomy may be required to get aspiration biopsy, frozen section biopsy, or exploration of the extent of the tumor. It is much more difficult, however, to distinguish solitary peripheral lesions from metastatic lesions.

The treatment of synchronous carcinoma of the larynx and bronchus involves a surgical attack on the more serious lesion. This nearly always indicates thoracotomy and pneumonectomy or lobectomy and perhaps post-operative irradiation. A tracheotomy should be performed before the thoracotomy is done for the purpose of administering an anesthetic. Intubation through a malignant tumor of the larynx may result in implantation of tumor in the trachea or bronchi. After recovery from this procedure the appropriate laryngeal therapy is achieved, be it laryngofissure, irradiation, laryngectomy or laryngectomy with combined en-bloc radical neck dissection.

Discussion

The relationship of associated laryngeal and bronchial carcinoma must be further elucidated by clinical studies to determine what etiologies they have in common. If inhalant irritants are common to these two conditions, then why are they not found to be co-existant more frequently? Perhaps one answer to this question is the fact that patients with laryngeal carcinoma on coming to a post-mortem examination may be found to have bronchial carcinoma. On the other hand, patients succumbing to bronchial carcinoma and examined post-mortem, may not be found to have laryngeal carcinoma, either intrinsic or extrinsic, because a study of the larynx is not included in the routine autopsy. This answer may be partially refuted by the fact that carcinomas of the larynx are usually symptomatic and demand clinical investigation.

Patients with laryngeal carcinomas, seen for post-treatment examination should be followed closely for development of bronchial carcinoma. If one is found, it should be regarded as a second primary lesion for the following reasons:

The time interval between lesions may be quite great, making metastasis unlikely.

Laryngeal carcinomas rarely metastasize to the lungs before saturating the cervical lymph nodes with tumor.

The two lesions may be different histologically.

Implants of tumor from the larynx into the bronchi are unlikely, due to the physiologic upward flow of the mucous blanket.

Metastasis of the larynx is quite rare and metastasis of bronchial carcinoma to the larynx has not been reported.

Therefore, if carcinomas of the larynx and bronchus are found in the same patient, they should be regarded as separate primary tumors and treated as such, not as metastases.

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800 N.E. 13th, Oklahoma City, Oklahoma

The Present Status of Corrective Surgery for Congenital Heart Disease

G. RAINEY WILLIAMS, M.D.*

Beginning with the successful treatment of patent ductus arteriosus in 1938, of coarctation of the aorta in 1942, and of the tetralogy of Fallot in 1944, almost unbelievable strides have been made in the surgical treatment of congenital heart disease, due to the development of satisfactory pump oxygenator systems. It is conservative to say that cardiopulmonary bypass is an established and safe procedure which currently carries an extremely low mortality rate. The once controversial subjects of optimum flow rates, importance of pH changes, nature of gas mixtures and control of temperature, remain of physiologic interest, but practical answers are at hand. Use of bypass in very small infants remains a problem which is apparently being solved at present.

A review of the current status of surgical treatment of specific types of congenital heart disease is generally encouraging. Uncomplicated atrial and ventricular septal defects can be repaired with a mortality rate which compares favorably with that for uncomplicated gastric resections. Surgical relief of congenital stenosis of both aortic and pulmonic valves is accomplished with an even lower immediate mortality rate. The incidence of associated and probably acquired pulmonic infundibular stenosis in older patients with congenital valvular stenosis is a matter of surgical concern and perhaps adds an argument for earlier treatment of valvular stenosis. The great care necessary in the actual performance of aortic commissurotomy to prevent regurgitation has been learned at a disappointing price.

Treatment of tetralogy of Fallot by total correction is a less successful procedure. The necessity of using prosthetic materials in repairing the ventricular outflow tract, adds to the surgical risk. It is certainly true that many satisfactory results can be obtained but there is yet no reason for complacency. The group of complicated congenital defects, transposition, single ventricle, A-V communis, Ebstein's anomaly and tricuspid atresia remain formidable. Total correction of transposition has been reported, but an extremely high mortality rate remains. Reduction of pulmonary flow in defects associated with large left to right shunts is palliative only.

If further advances in this field equal those of the past few years, the problems mentioned in previous paragraphs will be solved. In the technique of bypass itself, it seems probable that the immediate future will bring improvement in the convenience of the technique, and will permit the establishment of a cardiopulmonary bypass system which should allow prolonged support of the failing heart or other organ systems.

The future of surgical endeavor in treating specific defects is difficult to predict. However, it seems likely that the future will bring a broadening of the indications for surgical correction of uncomplicated septal defects. The use of prosthetic valves can be predicted with some confidence. In the treatment of the tetralogy of Fallot the future will surely bring improvement of present technical methods for dealing with the pulmonary outflow tract. The problem of preliminary shunts and their advisability will be solved by prolonged experience by careful observers, but complicated intracardiac defects probably will continue to offer the greatest challenge in the field. Finally, what must be considered the ultimate in cardiac surgery, the transplantation of an entire heart, seems certain of eventual accomplishment.

*Assistant Professor of Surgery, University of Oklahoma Medical Center.

MEDICAL CENTER

Message from the Dean

Recently, it was my privilege to attend a meeting of the Medical School Liaison Committee of the Oklahoma State Medical Association, and the thoughtful interest of the members was an inspiration and an encouragement to me. Serious, constructive discussion was given to some of the problems in which the medical profession and the medical school have a common interest.

During the 40 years that I have been engaged in medical education, my ideal has been that Medicine is of great stature and of noble purpose, and that the continuity and strength of the profession necessarily begins with the education of its future members. Moreover, the reason that medical education excells in this country is because of two things: the devotion of medical school teaching staffs and the support of medical education by the profession. No other profession has so succeeded in developing an educational program which not only presents the theoretical and scientific basis of its knowledge but also the efficient application of this ever-advancing knowledge to actual care and treatment of patients, for which the whole is designed.

Physicians have so many duties that one hesitates to suggest that they take yet another hour to champion medical education, but this facet of their professional life happens to be one of the greatest importance, for the interest of the profession, past and present, must be kept alive in the profession that is yet to be.

It is therefore a mark of distinction for the physician to be helpfully concerned with the goal of our medical school. Contrast a doctor who says he cannot be concerned because at some time he could not get a patient into the University Hospitals with the one who realizes that all who are interested in medicine are in the same company and need to support the best there is in medical teaching and research.

The immediate past-president of the Oklahoma State Medical Association, Doctor Walter E. Brown of Tulsa, has shown the finest spirit in this regard. I shall never forget his most courteous interest. He and many other good physician friends have realized that there are certain professional problems which only organized medicine can solve, and that these problems should not be confused with those which pertain purely to education.

A number of medical schools in surrounding states have in recent times received from $13 million to $17 million each to modernize their buildings and equipment. We differ in no respect in our needs. Many of our medical school alumni and other physicians in our state have devoted themselves to forwarding our Ten-Year Program of building improvements. Probably the full achievement of this goal will require time, so this effort needs the continuing help of every physician who has a real desire to advance the future profession of medicine in Oklahoma.

Mark R Everett

The Treatment of Gout and Its Complications*

JOHN H. TALBOTT, M.D.**

GOUT is a parent term used without reference to acute or chronic joint distress. Its use is justified in any individual who has suffered one or more attacks of acute gouty arthritis. The only demonstrable abnormality in such an individual between attacks may be an increased concentration of uric acid in the serum and other body fluids. If the prophylactic management as outlined later is adequate the incidence of acute attacks should be a minor clinical matter. This period between the attacks was identified formerly as the intercritical period. I now prefer the term prophylactic period. Chronic tophaceous gout is the fate of only a small number of patients. This is the late stage of the malady and several decades may elapse following the first attack before tophaceous changes appear. Fortunately this is the fate of but a small percentage of the afflicted. Gout is a familial malady, a feature that I have been especially interested in for a number of years. Approximately 20 per cent of all blood relatives of gouty patients will have a concentration of uric acid above 6 mg., as illustrated in figure 1. The transition from a normal concentration to the gouty range in these individuals probably occurs during adolescence. I am not particularly fond of the term gouty diathesis and use it only in relation to nonaffected members of gouty families.

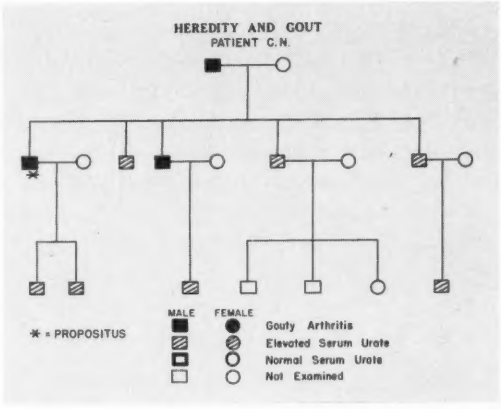

FIGURE 1

We are following a relatively large group of nonaffected relatives who have no stigma of the disease except for the increased concentration of uric acid in the serum. The increased concentration is a persistent observation, while the appearance subsequently of clinical manifestations of acute gout are observed infrequently. The probability is not more than one in ten that a nonaffected relative with an increased concentration of uric acid will develop acute articular symptoms over a score or more of years. Nor is any treatment believed to be justified until after the initial articular episode. We have never considered it wise to recommend the administration of Benemid or col-

*Presented at the Second Oklahoma Colloquy on Arthritis and Rheumatic Diseases.

**John H. Talbott, M.D., is Editor of the Journal of the American Medical Association.

chicine to nonaffected relatives prior to the initial attack. Because of the incidence of arteriosclerosis in gouty patients one might raise the question as to whether or not we should restore to normal the elevated uric acid levels and possibly inhibit the development of vascular sclerosis. This is highly theoretical and I take little stock in this possibility. The matter of arteriosclerosis will be mentioned later under treatment.

Gout has been observed in the several races throughout the world and may have a slightly higher incidence in the United States because of the high standard of living. This I am not at all convinced of. Although the Negro is by reputation presumed to be immune from gout there are a number of well-documented cases. Even families of gouty individuals have been reported among Negroes.

The three likely internal dysfunctions which might lead to an increased concentration of uric acid in the body fluids include diminished destruction, diminished excretion by the kidney and increased formation through a defect in intermediary metabolism. Increased formation of uric acid by the body, which leads to an increase in the size of the metabolic pool, is believed to be the most satisfactory explanation. The augmented metabolism and the increase in uric acid in body fluids need be but slight to account for the chemical findings in gout. Of course a similar statement might be made also regarding impaired excretion. An increased uric acid synthesis in gout has been demonstrated by isotope studies, utilizing glycine labeled with heavy nitrogen. The increased incorporation of glycine was found originally in a few patients only. Wyngaarden, utilizing glycine labeled with heavy carbon, has reported the phenomenon in all gouty patients studied by him.

The isotope techniques have been helpful in yet another category of the problem, *i.e.*, in clarifying the position of dietary foodstuffs as precursors of uric acid. Uric acid is the end product of metabolism of purine substances in humans, while urea is the end product of the nitrogenous substances of amino acids and pyrimidine origin. If we refer to the structural formula of uric acid, it is apparent that a number of simple biologic substances may provide essential ingredients to the uric acid molecule. Since some of the simpler biologic substances such as carbon dioxide, formic acid, glycine, and lactate may contribute a nitrogen or carbon atom to the uric acid molecule in the intermediary metabolism of this substance of the body, is not it wishful thinking to hope that rigid restriction of proteins will correct the metabolic disturbance?

A number of precipitating agents have been implicated in the acute articular episode. Recognition of them is of practical significance and should be appreciated by the patient and physician. Overindulgence in rich food and alcohol occupy prominent positions in the older literature. I believe that there is no satisfactory evidence that specific factors in any of these categories are intimately responsible for the acute episode. The insult to the body is believed to be general. Even high purine foods sometimes fail to incite an acute attack and are not particularly reliable as provocative agents in the diagnosis of the malady. There are other items that have a closer relationship to acute gout. These include drugs, local injury, acute infections, blood loss and surgical operations Parenteral penicillin should be prescribed to gouty patients only if there are sound clinical indications. Parenteral vitamins, insulin, mercurial diuretics and ergotamine tartrate have been implicated also. Poorly fitting shoes and gloves may cause sufficient irritation to precipitate an acute attack. The precipitation of acute gout by a surgical procedure, minor or major, is of sufficient importance to warrant attention to the administration of antigout agents and prophylaxis preceding planned surgical intervention. Weather, exposure to the elements and other poorly defined items may be classed as general inciting agents, not specific.

The mechanism of the acute articular episode is not understood. The infiltration of joint structures by urates most likely precedes the acute symptoms. Once joint structures have been invaded they are never immune to an acute attack. Increased precipitation of urate crystals preceding or during an acute attack may occur but this has not

been proved. The polyarticular nature of many of the acute attacks suggest that a systemic disturbance rather than an exclusively local one is responsible for the acute bout.

An acute attack of articular distress in one or more of the peripheral joints usually is the first sign of gout and the diagnosis probably should not have been entertained seriously until after this event. There are symptoms or isolated observations, however, that may precede the characteristic articular findings, and if identified might be interpreted as precursors of articular gout. Albuminuria, elevation of blood pressure and the passage of uric acid gravel as a kidney stone, respectively, have been noted before the first articular attack. There are several patients in our series who have passed a renal stone, in some instances a decade before the onset of articular gout. This is not surprising since one patient in seven with clinical gout will pass a renal stone one or more times in the natural history of the disease. Albuminuria and hypertension are present in a significant number of patients with classical gout. If such ancillary features are observed in some patients after the initial articular episode, the mechanism responsible for such might be operating in isolated instances before the first attack.

The typical onset of acute gout is sudden and may appear at any time of the day or night in any season of the year. The metatarsal-phalangeal joint of the great toe usually is afflicted but other peripheral joints of the upper or lower extremities may be involved. An acute elbow, a knee or a wrist may be the site of the initial episode and unless gout is considered the patient is denied prompt and proper treatment of the complication. The pain suffered is excruciating and appears at times to be near the limit of endurance. Effusion into the joint space and edema of the surrounding soft tissues may cause intense agony and simullates severe inflammation. Maximal tenderness on lateral pressure may be detected. In addition to the usual joints, an acute attack of gout may develop in the bursa, a tendon or subcutaneous tophus. The systemic reaction to the acute process may be indistinguishable from that which accompanies

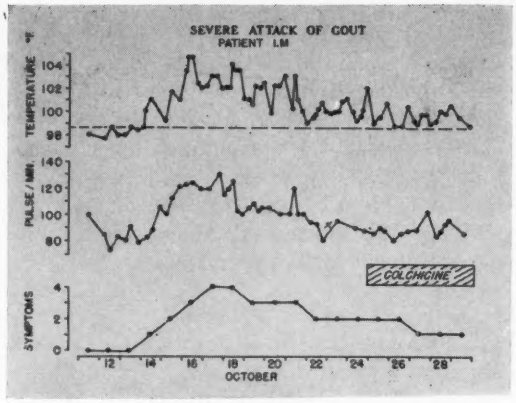

FIGURE 2

an acute infection including fever, chills, malaise, headaches, tachycardia and anorexia. The temperature may be as high as 104° F. with leukocytosis and an increase in the sedimentation rate (figure 2).

The duration of an acute attack is unpredictable if specific measures are not instituted. Symptoms may persist for only a few hours in a mild attack; in unusual instances, low grade symptoms may persist for several weeks. If an acute attack has persisted for several days, desquamation of the involved joint and surrounding skin may be noted after normal function has returned.

Restoration of function sometimes is delayed unnecessarily because of the reluctance of patients to use a joint recently affected, particularly if the joint is a weight bearing structure. I encourage patients to resume normal activity as soon as possible.

The interval between attacks varies considerably. Several years may elapse. In unusual instances, a score of years may separate the initial attacks. The frequency of attacks tend to be greater as the disease progresses in spite of the absence in many patients of clinical evidence of tophi. The majority experience a progression of the disease and are prone to suffer greater incapacity from acute gouty arthritis unless prophylactic therapy is followed. Between acute attacks, in patients without chronic articular changes, there are no subjective symptoms or objective findings.

Kidney involvement is the only critical complication. It is important to note that

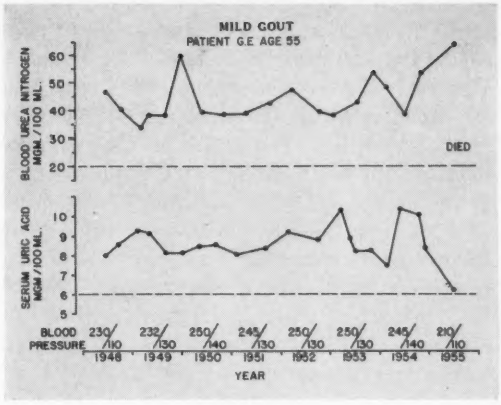

FIGURE 3

although a significant percentage of patients with gout will have laboratory evidence of renal disturbance, longevity is not impaired. Among the gouty patients that are now being followed in our clinic, almost 30 per cent show minor or major evidence of renal disturbance. Albuminuria and inability to concentrate maximally is the evidence. On the other hand, only a small number of patients has shown a persistant increase in the concentration of blood urea and only a few have died in uremia during the past decade (figure 3). The protracted course of renal dysfunction in gouty patients with demonstrable renal disease is noteworthy. The diagnosis of chronic nephritis might have been assumed if proper emphasis had not been given to the past history or clinical findings of gout. Nor is the diagnosis of chronic nephritis justified in most patients who have gout and die of renal insufficiency. I prefer to consider this as a complication of gout rather than the coexistence of gouty arthritis and chronic glomerulonephritis. The precipitation of urates in the tubules which cause mechanical or chemical irritation is a reasonable explanation for the albuminuria. The kidney having been insulted repeatedly from the precipitated urate is probably more susceptible to secondary processes as pyelitis, pyelonephritis and amyloidosis.

The diagnosis of gout rests upon clearly defined criteria which are not difficult to satisfy in the afflicted. If a patient, particularly a male, has acute joint distress every effort should be made to identify specifically the type of arthritis. I believe that the clinical characteristics of the acute attack are the most helpful of each of the several criteria in the diagnosis of gout. If I had one finding only upon which to render an opinion I would place the greatest reliance upon the clinical characteristics of the acute episode. When the patient is seen after subsidence of acute symptoms, it may be possible to have the patient recount accurate details sufficiently to provide reliable diagnostic data.

An increased concentration of serum uric acid is confirmatory but not diagnostic. There is ample evidence to support the statement that the concentration of uric acid in the serum in patients with gout, in the absence of any agent that aids in the elimination of uric acid in the body, is elevated (figure 4). The increased concentration in the serum precedes the acute attack, persists during the acute attack and is present after the attack. Unfortunately, the determination of uric acid presents technical difficulties in some biochemical laboratories that have not been resolved at the present time. Once a patient with gout reveals the telltale stigma of an increase of uric acid in the serum, this finding persists without exception save for the administration of drugs which affect this constituent. Most important is the questioning regarding the intake of anti-arthritic drugs on the days immediately preceding the collection of blood for the determination. The concentration in the serum may be within the normal range in a bona fide case of gout if anti-rheumatic agents such as salicylates, steroids or phenylbutazone have been taken in therapeutic quantities in the day or two preceding the collection of blood for the determination. Thus, it is our practice to withhold any anti-

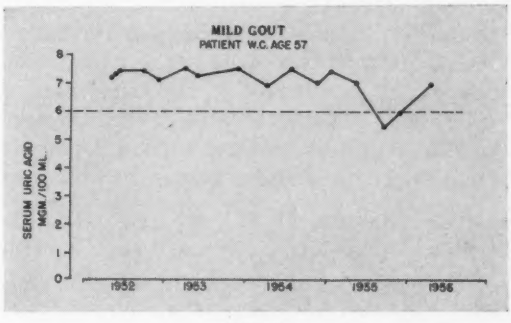

FIGURE 4

arthritic agent for a period of at least 48 hours before obtaining blood if a satisfactory pretreatment value is desired. It should be noted that colchicine is the only specific antigout agent and it has no effect upon the uric acid level in the serum.

More useful than the concentration of uric acid in the serum is the response to a full course of colchicine during the acute attack. Although this drug has been used for many centuries in the treatment of joint distress, it is specific for acute gout and has little or no effect upon other forms of acute articular distress. Most patients with acute gout respond to the full course as will be described below and the presumptive diagnosis is thereby strengthened materially. Salicylates, steroids and phenylbutazone are non-specific anti-rheumatic agents and are less useful, therefore, as a combined diagnostic and therapeutic guide.

There are two other items usually discussed in a consideration of the various diagnostic criteria, i.e., subcutaneous and osseous tophi. The urate tophus in the ear is the hallmark of gout but it appears in a small percentage of patients only. Although tophi may appear relatively early in the clinical course, their presence means well-developed gout and the diagnosis should have been made several years earlier. The Achilles tendon is another area prone to attract urate deposits in a moderately severe case of gout.

Roentgenographic evidence of gout in the bones of the extremities is well recognized. The characteristic findings are caused by replacement of normal cartilage and bone with sodium urate. Tophi must obtain considerable size, however, which involves years of slow precipitation before they are visible by x-ray. Hence, x-ray changes are not to be expected in the early years of articular distress. A number of patients may have a fairly long history of intermittent attacks and still present normal roentgenographic findings in the affected parts.

The management of gout and gouty arthritis involves a triple attack upon the metabolic malady. Fortunately each phase currently is susceptible to pharmacologic agents. The three phases are: 1. The acute articular episode; 2. The prevention of recurrence of acute attacks; and 3. The resorption of subcutaneous and osseous uric acid deposits. If a correct diagnosis has been made and gout is responsible for articular distress, proper treatment will be rewarding in the management of the acute articular episode as well as in the prophylactic handling and prevention of recurrences. Although gout is a chronic disease and the tendency to articular symptoms most likely will remain in each susceptible individual, irrespective of the efficacy of therapeutic agents, rich dividends may be anticipated in treatment.

The prophylactic regimen for the intercritical period will be discussed first because it is believed that prevention of acute attacks should take precedent. Although the acute episode is a miserable affair if allowed to reach full proportions, proper respect for the prophylactic regimen will reduce the incidence of acute attacks to clinical insignificance. The recommended schema is simple to follow, it permits the patient to live essentially a normal life and either stays or reverses the previously progressive effects of the disturbance of uric acid metabolism.

Management is concerned largely with the regular administration of two effective antigout agents, colchicine and Benemid (figure 5). Each one complements the other; neither one by itself is as effective as the combination. It is a good practice to recommend some colchicine regularly to each patient with gout. The practice has been followed for more than two decades; in recent years in conjunction with Benemid. If the malady is mild and the past history reveals that the patient has had not more than one attack

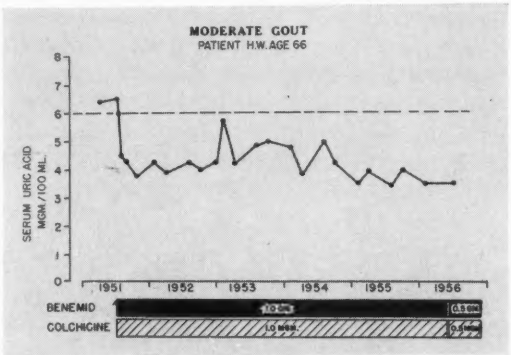

FIGURE 5

per year, one tablet of colchicine, 0.5 mg., is recommended in each of three days per week. Patients moderately afflicted should take one or two colchicine tablets each day of the year. The severely afflicted should take colchicine daily up to the point of gastro-intestinal tolerance. This may be two, three or even four tablets each 24 hours. The incidence of acute attacks is reduced significantly by the periodic use of colchicine. Tolerance does not develop to the drug and if an acute attack appears, a full course is maximally effective, irrespective of previous ingestion. Persons who have been on daily rations of colchicine for a decade or more, receive the optimum benefit from a full course when this is prescribed. Another obvious gain in the ingestion of colchicine regularly is the advantage of having started the course at the earliest possible moment should acute symptoms appear.

Prior to 1950, colchicine stood alone as the prophylactic drug for use in the intercritical period. Since that time Benemid has become available and the greater the experience with the combination the greater the reliance we place upon it. Benemid is an excellent agent for eliminating uric acid from the body and results in a concomitant decrease in the concentration of uric acid in the serum. The average dose of Benemid for persons moderately afflicted is 1 gm. daily. The severely afflicted, that is those with chronic tophaceous gout, take 1.5 or 2 gm. daily. If the level of uric acid in the serum is in the high gouty range 8-12 mg., the ultimate level on Benemid averages 6-8 mg.

The most important subjective evidence of the value of the combination of Benemid and colchicine is the diminution or elimination of acute attacks of gout. A majority of patients, irrespective of the severity of the disease, average less than one day per year of incapacity, as illustrated in figure 6. This represents a striking change from the incidence of acute attacks before beginning the combined therapy.

The action of Benemid is upon the tubular cells of the kidney and the function affected is reabsorption. With partial blocking of reabsorption, more urate is excreted in the urine than under normal circumstances. The drug is rapidly and effectively absorbed from the intestinal tract when taken orally and is carried in the blood stream partially bound to plasma proteins. The alteration upon uric acid metabolism is transient, however, and when the drug is stopped there is a prompt return of the serum concentration to the pre-Benemid level.

Most important is the low incidence of toxicity of these two drugs. We have never been forced to discontinue colchicine permanently on any patient with gout. If maintenance doses of colchicine appear to keep the large bowel too active, the dosage is reduced to the sub-irritation level. Several patients have chronic gastro-intestinal disturbances in addition to gout and are able to adhere to the prophylactic drugs satisfactorily. These patients either have a peptic ulcer, ulcerative colitis or chronic pancreatitis. Bone marrow depression has not been observed. However, there has been one instance reported of liver damage following sensitivity of Benemid. The incidence of renal stones is unaltered statistically. If gastro-intestinal distress appears it may be prevented by the ingestion of the drugs with meals. A few patients have developed a skin rash. This has been corrected by a course of desensitization together with an anti-histaminic. Most important in the prophylactic management is the insistence upon a high fluid intake. Since the solubility of uric acid in body fluids is near the critical level, any increased excretion of uric acid in the urine should be offset by an increased urine output.

The length of time that the patient should be on Benemid daily has not been determined. It is our prediction that patients with chronic tophaceous gout will continue on it indefinitely. Patients moderately afflicted have reverted to smaller doses in some instances, meanwhile maintaining colchicine regularly for articular prophylaxis. Diminution of the dose has not been recommended until after the prophylactic regimen has been continued for a minimum of two or three years. It is not believed that these drugs cure gout in the usual sense of the word. The presence of mild renal dysfunction is not a contraindication to the regular administration of these drugs.

We do not recommend Benemid without

colchicine. It is believed that the incidence of acute attacks would have been influenced eventually if Benemid had been ingested for one or more years. This approach seems to be to us less than ideal for it fails to take full advantage of the combined therapy.

General measures during prophylaxis include few prohibitions. There is meager evidence only that the alcoholic beverages consumed in moderation aggravate the metabolic disturbance. Most patients with gout are able to remain in a symptom-free state, meanwhile enjoying a temperate intake of alcohol, if this is their wish, and if the other antigout measures are respected. It is believed that the harm from alcohol comes primarily from the quantity consumed. Intemperance, as a general principle, is bad whether it concerns food or alcohol. A balanced diet is the rule. High purine substances only are prohibited. Obviously, if nitrogen retention is present protein should be restricted also. Out-of-door activities should be permitted, contingent upon general rather than specific rules.

One of the objective findings that follows Benemid therapy is the reduction in the size of subcutaneous and osseous tophi. If large subcutaneous tophi are observed it is our practice to remove them surgically, rather than to wait for Benemid to reduce them gradually. The cosmetic effect is achieved shortly after operation and the possible added load upon the kidneys in excreting the excess uric acid is obviated.

If proper attention is given to the prophylactic regimen the attacks of acute gout should be infrequent in incidence and mild in severity. Patient F. D. is an example (figure 6). In 1947 this patient, a member of a gouty family, was confined to bed for almost three months because of migratory gouty arthritis. He was placed on colchicine, 1 mg. daily and had two mild attacks each year until 1954. At that time Benemid, 1 gm. daily, was added to the prophylactic regimen. For almost four years now he has lost no time from work. This is an illustrative case and represents the experience among the majority of the patients on the prophylactic regimen.

The most valuable agent in the treatment

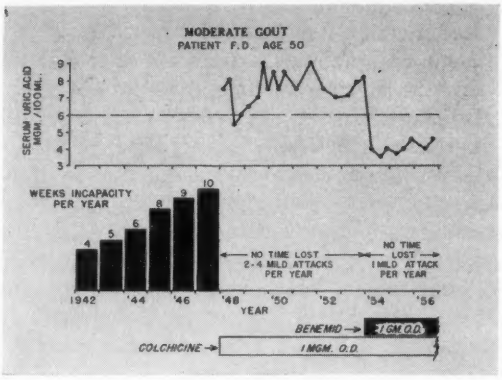

FIGURE 6

of the acute attack continues to be colchicine. This may be combined with phenylbutazone, ACTH or other steroids but has not been replaced by any preparation. The amount of colchicine prescribed should be based upon the severity of the acute attack. The subsidence of symptoms in the mild attack may follow the ingestion of not more than four or five single doses of chochicine. A moderate or severe attack may require a dozen tablets over a similar number of hours. The limiting factor is the onset of gastro-intestinal distress which is the signal for cessation of colchicine. The administration of colchicine in the first few minutes after onset of articular distress is most important and if there is a question regarding the development of acute articular gout the disease should receive the benefit of the doubt. Usually the acute distress in the joint or joints affected begins to subside near the close of the colchicine schedule. Hour by hour, thereafter, the joints become progressively less painful. Within 24 hours after beginning colchicine ingestion, significant improvement should be expected with the patient well on his way to recovery.

As an adjunct to colchicine, and in some instance to replace colchicine, several other preparations are now available. Each has merit, each has strong proponents in support of its use, but a proper respect regarding the value of each is sought.

Phenylbutazone is an effective anti-inflammatory and analgesic drug and is valuable but is not specific for acute gout. Some physicians recommend it as a sole drug for the treatment of the acute attack; others

recommend it in conjunction with colchicine. We use it only in the latter category. Because of toxicity, even the staunchest advocates of this drug advise caution in this respect. If ACTH is used from 60 to 80 units of the gel may be administered parenterally for two or three days.

Intravenous colchicine holds a limited but definite place in the treatment of the acute attack. The patient, however, should not be dependent upon intravenous administration which may delay effective treatment and impose an unnecessary burden upon a physician or a nurse. This route is indicated in instances where treatment has been inadequate by mouth or for other reasons has been poorly carried out. Post-operative gouty arthritis may appear in a patient who is unable to tolerate a full course of oral colchicine. At other times in selected individuals the intravenous route is preferred. It is my practice to administer 2 mg. of colchicine intravenously and repeat the dose every 8 hours as needed. The development of gastro-intestinal distress is less of a problem with similar doses given parenterally when a comparison is made with the oral route.

I am firmly convinced that the combination of colchicine and Benemid provides the most effective means of attacking the disturbance of uric acid metabolism available at the present time. Patients mildly or moderately afflicted lead normal lives in every major respect. Those with chronic deforming gouty arthritis may be handicapped to a limited degree but are not incapacitated. There are several patients in our series, either forced to retire prematurely or to pursue part-time jobs only to have resumed a full-time gainful occupation following the combined therapy. Not a single patient in our series has become permanently handicapped or crippled while on the regimen; not a single patient has been forced to restrict further his gainful activity.

The clinical results during the past few years are gratifying and I believe represent the most satisfactory treatment of any major type of joint disease. Not only is treatment satisfactory but the prevention of incapacity and the provision for normal living makes the disease a minor rather than major problem for the afflicted.

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Degenerative reactions in the musculoskeletal system.

Degenerative Arthritis*

WILLIAM K. ISHMAEL, M.D.
MARY DUFFY HONICK, M.D.
J. N. OWENS, JR., M.D.

A STRESS REACTION occurs in a musculoskeletal structure if it is driven beyond its physiologic capacity. This may be recognized as a sprain or strain, or the "stiffness" the day following unusual exercise. Should this reaction occur persistently, beyond the structure's ability to adapt (hypertrophy), a breaking down or degenerative process ensues, which if sufficiently accelerated, becomes proportionately painful. Thus a degenerative reaction may be created.

The speed and intensity of the traumatic force versus the ability of the structure to withstand the trauma coupled with the subject's willingness to stop the offending stress before his capacity has been exceeded, constitute the three contributing etiologic factors in this process. Hence, one would expect to find a significant portion of his patients with degenerative arthritis to be conscientious, somewhat dedicated, rather intense persons who tend to become exhilarated or tense instead of sleepy when overly tired. Or there may be a history or evidence of a physiologic change resulting in fatigability of the musculoskeletal system or an alteration in their physical endeavor.

Most structures are capable of repair following a degenerative reaction; however, articular cartilage, when involved is largely incapable of repair. Hence, the cumulative effect of years of trauma would tend to make degenerative arthritis a disease of the older age group. Degenerative arthritis and aging, however, are not synonymous. Likewise, the younger age groups beyond adolescence are not immune, especially in instances where injury or cartilagenous disorder such as osteochondritis deformans has existed.

Normally, one would expect to find degenerative joint disease occurring in the joints where the greatest trauma occurs, but this is not true. The disease occurs for the most part in the spine, fingers, and knees; however, the hips, bunion joints, and the C.M.C. joints of the thumbs may become spontaneously involved in a small per cent of patients. Degenerative arthritis does not involve other joints unless trauma or disease has destroyed the cartilage. This selection of joints is of etiologic and nosologic significance, worthy of consideration.

Stecher[1] has pointed out that, "osteoarthritis, formerly thought of as being a generalized degenerative joint disease has been shown to be a collection of particular diseases, differing from each other in joints involved, sex ratio, age of onset, relation to the menopause, and heredity factors." He further states, "the pathologic changes have been confused with those of old age and the disease has been classed as a degenerative one. This is true of osteophytosis of the spine, which depends upon degeneration, loss of elasticity, and deformity of the intervertebral discs; in the hip and knee, however, there is invasion of cartilage by new blood vessels and the transformation of cart-

*Presented at the Second Oklahoma Colloquy on Arthritis and Rheumatic Diseases.

ilage to bony spurs." Stecher has pointed out previously that Heberden's nodes arise spontaneously without known predisposing cause. An inherited pattern has been determined clearly for the form of osteoarthritis which spontaneously affects the terminal I.P. joints. Apparently a single autosomal gene is involved. This is sex linked, dominant in females and recessive in males. This pattern has not as yet been shown to exist for other varieties of osteoarthritis, confirming Stecher's opinion that "osteoarthritis is a collection of particular diseases."

We have then, not a single disease entity causing the most frequently encountered of the rheumatic disorders, but an unknown number of variables which may result in a painful degenerative reaction. The resulting changes may follow injury, or be the result of a primary disease of the cartilage, or be the end result of intensive daily trauma in otherwise normal joint structures.

Trauma or mechanical force is of etiologic significance but perhaps not as much as has been previously suspected. Case histories on a group of Hindu porters whose ages varied from 25 to 65 years failed to reveal any complaints referable to their spine. Their radiograms, however (figure 1), were no different from those in comparable age groups in Americans of sedentary occupations. Figure 2 demonstrates advanced degenerative changes in a spine, associated with scoliosis. This patient, however, has not had any complaints referable to the spine, illustrating the poor correlation which exists between radiographic changes and musculoskeletal complaints. How then does one evaluate the symptomatology of degenerative arthritis and arrive at an equitable diagnosis?

Diagnosis of Degenerative Arthritis

First, one must determine the relative importance of the three contributing factors in each patient. This method is summarized in chart 1.

If the patient has his greatest pain, stiffness, and soreness upon arising in the morning and a tendency to "gel" after rest, feels his best at bedtime, has complaints in predictable areas and physical findings confirm his complaints, is affected by the weather and relieved at least in part by analgesics, then one suspects that his complaints are the result largely of organic changes. If the acute phase reacting laboratory data are normal, then one would suspect degenerative arthritis. If, on the other hand, he states that he feels his best after a night's sleep and there is no tendency to "gel" after a prolonged position, but as the day progresses there is pain somewhat in proportion to his daily endeavor and his complaints are in predictable areas and there is local tenderness to confirm his complaints but there is little or no relief from analgesics, no change from weather phenomenon, then he most likely is suffering from postural or general fatigue. Most patients with organic change have some degree of simple fatigue

FIGURE 1

FIGURE 1. Radiogram of the cervical spine of a 65 year-old male Hindu porter. This man reported that at no time had he had pain, stiffness, or soreness in his spine, yet he had worked as a rickasha puller from age 15 through 30, then as a porter carrying weights up to 60 pounds for variable distances.

FIGURE 2. This radiogram of the spine of a 70 year-old female patient demonstrates advanced degenerative lipping along the concave margin of the lumbar portion of a scoliotic spine. This patient complained only of her knees and reported that at no time had the spine been painful.

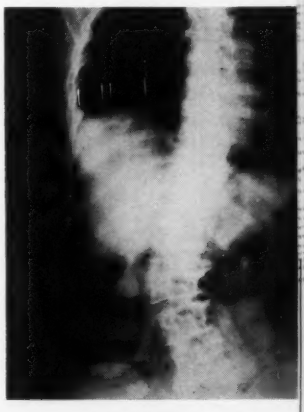

FIGURE 2

A GUIDE TO THE DIFFERENTIATION OF ORGANIC, FROM POSTURAL, OR FROM PSYCHOMOTOR, OR MALINGERING FACTORS IN THE CAUSE OF MUSCULOSKELETAL COMPLAINTS

	Organic disease.	Postural or mechanical strain.	Psychomotor or malingering.
Stiffness and soreness upon arising in A.M.	Marked and significant.	No, unless patient has lain in a position producing strain. Feels best after night's rest.	"Worse all the time," or "never get better."
Complaints in predictable areas.	Yes	Yes	No. "Hurt everywhere."
Relieved at least to a degree, by analgesics.	Yes	Very slight, if any.	"Nothing helps."
Affected by weather.	Yes	No	No; at least not consistently.
Does pain awaken patient at night?	Yes, especially if an expanding lesion in bone (tumor, abscess). No, if pathology mild.	Not unless postural strain occurs. Relieved by changing positions.	No. May have insomnia from other causes.
Degree of pain proportionate to objective findings.	Yes	No	No
Physical findings in predictable areas.	Yes	Yes	No. "Touch-me-not" reaction.
Evidence or signs of organic disease.	Apt to be present.	Yes, if anatomical defect is cause of strain. No, otherwise.	No
Radiographic change.	Usually present.	Only if anatomical defect is cause.	No. If changes are present, of no significance.
Laboratory change.	Yes, if characteristic of disease.	No, unless part of factor causing fatigability.	None pertinent to disease.

CHART 1

Features which help differentiate the three factors which contribute to musculoskeletal pain: organic changes, postural fatigue and psychomotor reactions or malingering.

superimposed with a modicum of increased pain toward evening, at least on occasions.

Should the patient, however, state that he hurts "all the time" and is "never any better," and whose complaints are not in predictable areas, and has a "touch-me-not" reaction on physical examination, and responds unpredictably or erratically to analgesics, weather, and physical strain, then it is safe to conclude that his complaints are the result of psychomotor phenomena or malingering regardless of changes which may be present in his radiograms. It is not unusual for patients with organic or fatigue pain patterns to have certain elements of psychomotor phenomena superimposed. Failure to differentiate these three basic causes of pain may lead to confusion and discouragement both on the part of the patient and his physician.

Symptomatology

What are "predictable" symptoms and findings in degenerative arthritis?

Degenerative joint disease, when it involves the hand, does so rather characteris-

FIGURE 3. Radiograph of hands demonstrating typical changes noted in primary osteoarthritis. The distal I.P. joints reveal loss of joint space with lipping about the opposing joint margins. There is ulnar deviation of index finger and radial deviation of the little fingers. Note also the involvement of the I.P. joints and the carpometacarpal joints of the thumbs. The metacarpophalangeal joints are normal, illustrating the characteristic sparing of these joints in this type of arthritis.

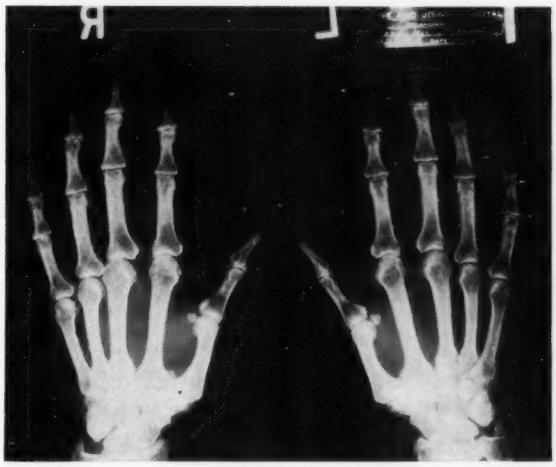

FIGURE 3

tically (figure 3) by the production of Heberden's nodes involving the terminal I.P. joints. If they follow an injury such as a "baseball finger," then one would ascribe their cause purely to trauma (figure 4) and expect little or no involvement of other joints. If, on the other hand, these nodes arise spontaneously and tend to occur bilaterally symmetrically then one suspects an inheritable organic factor in the etiology and would expect involvement of the spine and knees in 12.7% of these patients, according to Stecher,[1] as compared to an incidence of 2.8% of his controls. Spontaneously occurring Heberden's nodes start gradually as a swelling of primarily the dorsum of the terminal I.P. joint, initially may be red, tender, and somewhat inflamed and fluctuant with sometimes a blister-like lesion on the dorsum. These then gradually subside over a six months to two year period to a resting stage of a hard, nonfluctuant, nonred, nontender lesion which may be a mild dorsal enlargement, or may have "two small pea sized nodules, a little to the side" as originally described by Heberden. As the lesions heal, the

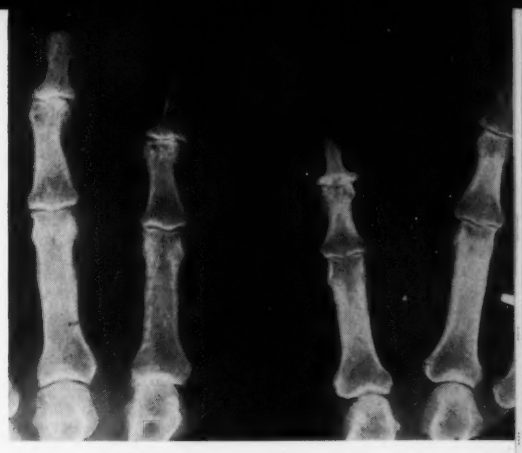

FIGURE 4

FIGURE 4. The changes present on the radiogram on the left have resulted from osteoarthritis. Note similarities between this film and the one which illustrates a "baseball finger."

dorsal enlargement may increase, giving a flexed appearance. In the final stage, if there has been marked spur formation, the distal joint of the index fingers may attain ulnar deviation and the little fingers radial deviation, with the middle and ring fingers deviating in either direction. These nodes affect women approximately ten times as frequently as they do men and around half of the women date their onset from the menopause. There is no correlation of Heberden's nodes with obesity.

The proximal joints of the fingers may also be involved in degenerative arthritis in around half of the patients who have spontaneously appearing Heberden's nodes and may be mistaken for rheumatoid arthritis or gouty arthritis. They never sublux, dislocate, or fuse, but may restrict motion to the point of preventing complete extension, or making a tight fist. The M.C.P. joints are never involved in degenerative arthritis and if involved, indicate the presence of a different form of arthritis. The C.M.C. joints of the thumb may be involved spontaneously and may produce symptomatology reminiscent of a tenosynovitis of the abductor mechanism of the thumb. Otherwise, degenerative arthritis of the hand produces pain, stiffness, and soreness of the joints involved, usually not acute or severe, but there may be burning and tenderness when the distal I.P. joints are acute.

The symptom complex resulting from degenerative arthritis of the knees is rather simple: pain, stiffness, and soreness, worse

FIGURE 5. Loss of intervertebral joint space and lipping of opposing margins of the lumbosacral joint illustrate changes characteristic of a "ruptured disc."

FIGURE 5

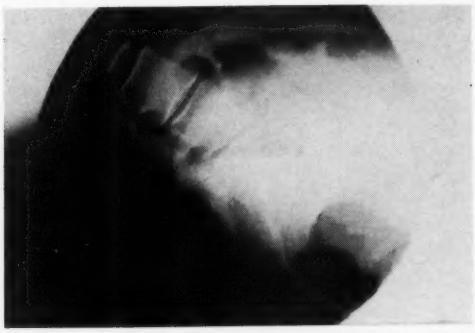

FIGURE 6. The decreased joint space occurring in both the lumbosacral and the fourth-fifth lumbar vertebrae in this radiogram may be properly termed "two 'ruptured discs'."

FIGURE 6

upon arising in the morning, improving after "limbering up," but worse the day following unusual stress. Many patients describe a "giving way" sensation when descending steps or an incline. Whereas all texts agree that obesity is a prime factor in production of painful degenerative reactions of the knees, our experience has not borne this out to the degree described by others. A significant proportion of our patients with knee complaints has been of average or less than average weight, but quick, wiry persons of the "race horse" type who may have a genu valgus or varus deformity.

The mechanism of the cause of pain in degenerative arthritis of the knees is far from simple, however. The aging changes in the knee have been carefully studied by Bennett, Wayne, and Bauer,[2] as they were previously by Heine,[3] and degenerative changes were demonstrated which were indistinguishable from degenerative arthritis but did not correlate in any way with whether or not the subjects had pain in their knees. One is justified to conclude that in the light of our present knowledge, *the clinical diagnosis of degenerative arthritis implies pain and tenderness.*

The mechanism of the cause of pain in the degenerative reactions of the spine is exceedingly complex and largely unknown. Most symptoms arise from the areas where the curve is reversed, i.e., the neck and low back, the cervical area being involved slightly more frequently than the lumbar area. When the cervical spine is involved, one may expect painful stiffness, crepitation, and soreness in the neck, worse upon arising in the morning, or there may be severe pain resulting from "cricks" or torticollis. There is usually radiation of pain, resulting in occipital, temporal, or frontal headaches which may be unilateral or bilateral. Pain may course into localized areas of the head and face, or result in the frequently complained of "neuralgias." There may be periods of "dizziness" or true vertigo, or "blackout" sensations or what some patients term as "crazy feelings" in the head. Sooner or later most patients have pain radiating into their shoulders and arms, varying from mild, diffuse muscular soreness to severe, localized, tenosynovial, bursal, or radicular involvement. The patient's course may be punctuated with a "frozen shoulder" or shoulder-hand syndrome, or other complicating reflex sympathetic dystrophic reactions. Chest pain is usually present from time to time, and may be associated with localized tender areas.

Arthritic involvement of the lumbar spine, as in the cervical area, is capable of producing a myriad of complaints. Local tenderness and soreness may be present over the spinous processes and paravertebral muscles, or mild to severe muscle spasm or severe "lumbago" attacks. Pain may radiate into the sacro-iliac areas and the posterior and lateral aspects of the hips or may provoke pain down the lumbar dermatomes, es-

FIGURE 7

FIGURE 7. If three or more vertebral interspaces are decreased in width as illustrated in this radiogram of a lumbar spine, the term degenerative arthritis, or more properly ostephytosis should be applied. There is no evidence at this time which would indicate any essential difference in the etiology of "one ruptured dics" illustrated in figure 5 or "two ruptured discs" in figure 6, and this radiogram with three or more "ruptured discs."

pecially the fifth or the first sacral, or in some patients produce coccygodynia and rectal pain. Many complain of heel pain.

There is exceedingly poor correlation between the patient's symptoms and the radiographic changes. If the width of one vertebral interspace is reduced, the diagnosis of a "ruptured disc" may be properly applied (figure 5). If two interspaces are involved, the diagnosis of two ruptured discs may be used (figure 6). If, however, three or more interspaces are involved (figure 7), then the diagnosis of degenerative arthritis, or more properly osteophytosis should be used. Most writers agree that the term arthritis should be reserved for involvement of the apophyseal joints.

FIGURE 8. The degenerative interspace changes present in this thoracic spine are in a male patient age 49. His history of being "round shouldered" since age fifteen strongly suggests the presence of osteochondritis deformans at that age.

FIGURE 8

The thoracic spine is less frequently involved and is more likely to follow juvenile epiphysitis (figure 8), osteoporosis, or osteomalacia (figure 9). Intercostal or substernal pain may result along with tenderness and pain along the spinous processes. Degeneration of the thoracolumbar interspace is not uncommon and is capable of producing rather severe pain in the upper abdomen and lower chest indistinguishable at times from intra-abdominal or intrathoracic pathology.

When one elucidates the history of a pa-

FIGURE 9

FIGURE 9. Demineralization of the thoracic spine, in this instance senile osteoporosis, which had become painful following a woodwork washing spree.

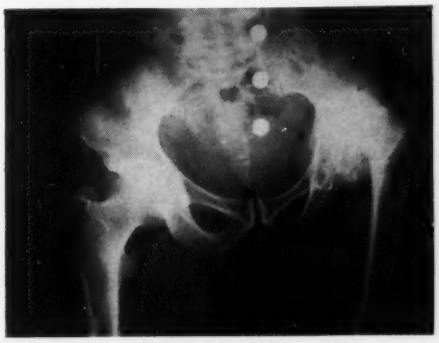

FIGURE 10

FIGURE 10. Degenerative reaction in the hip joint, probably initiated by a slipped epiphysis. This condition is usually termed "malum coxa senilis."

FIGURE 11

FIGURE 11. Malum coxa senilis resulting from Perthes' disease (osteochondritis deformans). Aside from a slight painless limp, this patient had no complaints until after the age of 50 although his deformity has been present since the age of eight.

tient with degenerative arthritis of the spine, a long-range, characteristic story usually evolves. During his twenties, thirties, and early forties, attacks of "lumbago," "sciatica," "sacro-iliac," neck "cricks," shoulder "bursitis," and headaches may occur from time to time, usually following periods of stress such as the pursuance of an endeavor with great intensity, surgical operations, pregnancies, menopause, unusual physical activities, or infections. The painful episodes may occur only on rare occasions and be limited to one or two areas, or there may be involvement of multiple areas which persists for years. Frequently, the diagnosis of fibrositis, myositis, neuritis, bursitis, tenosynovitis, or fasciitis is applied to these episodes; however, little or no change can be noted in the patient's complaints before and after the appearance of characteristic degenerative radiographic changes indicating a continuation of the same disease process throughout. Many patients complain less after the age of sixty than they did before the age of forty-five.

The hips are subject to degenerative reactions, and when involved, are known as "malum coxa senilis." In at least half of these patients, the disease follows some other primary disorders such as slipped epiphysis (figure 10), Perthes' disease (figure 11), protrusio acetabuli (figures 12 and 13), dislocation, fracture, or congenital malformation. Other forms of arthritis may also predispose. Pain from "malum coxa senilis," however, usually does not appear until the patient is in his midforties and does not get severe until he is in his sixties. Many of these patients develop intractable pain and become immobilized because of almost complete fusion of the hip joints.

Whereas most patients develop malum

FIGURE 12. Protrusio acetabuli (Otto's pelvis), another "type" of malum coxa senilis. Compare with film in figure 13 made on the same patient two years previously.

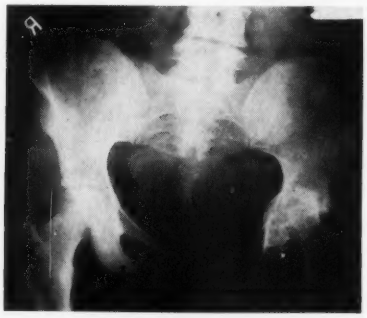

FIGURE 12

coxa senilis secondary to some other disorders, some have spontaneous onset. Figure 13 illustrates the development of protrusio acetabuli type deformity with no known predisposing cause.

The bunion joint, when afflicted with degenerative arthritis is termed "hallux rigidus" (figure 14). This condition usually follows an injury to the cartilage or may complicate a hallux valgus deformity. The resulting symptomatology is usually transient unless perpetuated by a hallux valgus deformity.

Treatment

Contrary to popular belief, most patients with degenerative arthritis can be relieved of their complaints by the use of measures now available. A notable exception, however, is hip joint disease. The management of the degenerative types of rheumatic disorders is as varied as the etiology and must be directed toward correcting as far as possible the three factors which contribute to the problem. Organic factors such as osteoporosis, osteomalacia, osteochondritis deformans, and metabolic errors secondarily involving the musculoskeletal system are capable of contributing to painful degenerative reactions when associated with sufficient stress. Also to be considered are atrophy of disuse, injuries, mechanical defects, rheumatoid arthritis, infections, and aging. Nothing is available presently that is capable of reversing the progressive degenerative cartilagenous process in inheritable primary osteoarthritis. However, in a sub-

stantial per cent of these patients, pain subsides when other contributing factors are corrected. Butazolidin, when effective and tolerated, is the drug of choice for the symptomatic control of the degenerative reaction. The use of 200 to 300 mgs. daily given somewhat as needed, is a relatively safe and effective measure in a substantial per cent of patients. Salicylate compounds are still the agents of choice for the daily aches and pains. Prednisolone phosphate, decaron phosphate, and hydrocortisone TBA administered intra-articularly are locally effective in temporary control of pain, stiffness, and effusion in well over half of the joints treated. The addition of the pancreatic proteolytic enzyme, dornase, or nitrogen mustard to these antiphlogistic glucocorticoids is usually rewarding in the more severely involved major joints. When given daily for three to five consecutive days, the anti-inflammatory effect may be long lasting.

Injections of local anesthetizing compounds are indicated in involved soft tissues and may be used along with the glucocorticoids. This procedure has added materially to the armammentarium of management of bursitis, tenosynovitis, fasciitis, and epicondylitis.

Utilization of various physical modalities is indicated in most patients, but chief emphasis should always be placed on mobilization and exercise of the part to forestall atrophy of disuse and improve the structure's ability to withstand stress. This is especially true for involvement of the spine[4] and knees.

FIGURE 13

FIGURE 13. Radiogram of same patient in figure 12 made two years previously. No known factors were present which would account for this change.

Correction when possible of organic factors secondarily contributing to the degenerative reaction is imperative. Osteoporosis resulting from deficiencies of protein, sex steroids, the intrinsic factor, and vitamin B12 requires consistent replacement therapy.

The sequelae resulting from osteomalacia caused by a fat or vitamin D deficient diet, steatorrhea, lactation, hyperparathyroidism, and renal osteomalacia usually respond well to correction of these errors.

Corticotropin administered intramuscularly along with the indicated replacement factors usually are a useful adjunct in relieving the acute muscle splinting accompanying "lumbago," torticollis, and other severe degenerative reactions.

Management of Physical Stress

The regulation of rest, exercise, and trauma is made difficult by the opposing deleterious effects of the atrophy of disuse versus strain from overuse. The patient's recognition and comprehension of the nature of the stress reaction may be enhanced by analogous illustrations understandable by him. The painful joint may be compared to a blister in the hand with emphasis on the fact that had the shovel been discarded sooner, the blister would have been avoided, and that the same shovel that produced the blister is also capable of causing a callous. The speed and intensity by which an endeavor is pursued may spell the difference between a toughening response or a degenerative reaction. The patient must rest when he is tired and avoid rushing, meeting dead-

FIGURE 14

FIGURE 14. Degenerative arthritis of the metatarsophalangeal joint of the great toe is known as "hallux rigidus."

lines, and the panicky feeling that all cannot be accomplished that he feels must be.

Specifically, in the spine,[4] increases of the lordotic curves must be avoided in the neck and low back. The "spectator's" or "on-guard" attitude of the neck as well as reading or televiewing in bed, and the use of high pillow are frequently precipitating causes of the cervical tension syndrome. Teaching the patient to keep one or both hips and knees flexed while sitting, standing or lying down reduces low back strain. Simply correcting the habit of a patient's lying on his abdomen may control a painful back or neck of long duration.

Knee strain may be reduced by the avoidance of extending the knees from a flexed position with weight bearing. Negotiating stairways and rough ground may also be stressful while quadriceps extension exercises and simple walking tend to strengthen a joint. It is imperative that the quadriceps mechanism be preserved through exercise at all times.

Management of the Factor of Psychomotor Phenomena, Psychogenic Rheumatism, and Malingering

These three problems may contribute significantly in any given patient's symptomatology. The "nervousness" complained of by most arthritic patients must be dealt with quite differently from true psychoneurosis (psychogenic rheumatism) or conversion hysteria or dishonesty of the patient who is malingering.

The practitioner is usually lacking in methods of definitive or satisfactory management of conversion hysteria. The malingerer with his usual manifest hostility presents a frustrating problem which is frequently made worse by the presence of his lawyer. Situational stresses predictably play a role in this group of patients. Sibling rivalry, entrapment problems, compensation reward, or hostility may contribute all or part of the pathogenic problem in a patient with psychogenic rheumatism. Fortunately, the patients who fall exclusively in this category are relatively few, less than five per cent in our experience.

On the other hand, the amount of psychomotor element present in most musculoskeletal stress or degenerative reactions is relatively strong. Using the blistered hand allegory, the physician may teach the patient that whereas the size of the shovel and the toughness of the hand are equally important, the patient's willingness to discard the shovel when he has "had enough" is of greater importance. The correction of why he continues beyond his endurance depends largely upon his recognizing the motivating force of conscientiousness and the vicious circle of excessive fatigue producing tension which interferes with sleep thereby producing more fatigue. The use of ataraxic agents such as meprobamate or promazine compounds aids in breaking up this vicious circle. If pain is sufficiently severe to interfere with sleep, analgesics are also needed. His subjective "nervousness" or tension is compared to the fretful, crying, defiant child who has gone too far past his nap time and cannot settle down sufficiently to get to sleep. It is further pointed out that punishment further upsets the child while gentling reduces his tension state.

The avoidance of excessive fatigue with its accompanying tension is necessary in order to control the symptomatology of degenerative arthritis. Whereas rest is the antithesis of stress, the patient's ultimate salvation lies in the correction of his structural easy fatigability through exercise and the rectification of the organic disorders contributing to his structural weakness.

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William K. Ishmael, M.D.
605 N.W. 10th, Oklahoma City, Oklahoma

ABSTRACTS

Serial Fibrinogen Determinations In Patients With Leukemia

JACK D. WELSH,* CHARLES ROBINSON,** and ROBERT M. BIRD***

Am. Jour. Med. Sci., **241**: 207-214, Feb., 1961

1. Twenty-six patients with leukemia were followed during a portion of their illness and serial fibrinogen concentrations were measured. Over half of the 225 fibrinogen determinations were abnormal. Seven patients, all with chronic lymphatic leukemia, never manifested an abnormal plasma fibrinogen value.

2. Considering single or consecutive values which were elevated as a period of hyperfibrinogenemia, then over half of such periods were either associated with infection alone or with infection and bleeding. In eight patients, the administration of adrenocorticosteroids at the time that the patient had an infection did not prevent the development of hyperfibrinogenemia.

3. Of the three documented episodes of hypofibrinogenemia, none was associated with in vitro clot lysis nor could any be directly related to bleeding.

4. A continued elevation of the fibrinogen concentration in the patient with leukemia and an infection indicates a poor response of the infection to therapy and a bad prognosis for the patient.

*Instructor in Medicine, University of Oklahoma Medical Center.
**Research Trainee, Cardiovascular Section, Oklahoma Medical Research Foundation.
***Associate Professor of Medicine and Phvsiology.

Communications Therapy Program in a Veterans Administration Hospital

ELLA MARY GEORGE,* JOHN L. BOLAND, Jr.,** and ELIZABETH M. KEVIN***

Jour. Am. Med. Women's Assn., **15**: 678-681, July 1960

The characteristics of a communications therapy program at the Veterans Administration Hospital in Oklahoma City are as follows:

1. Referrals to the communications therapy program early in the patient's illness are encouraged to speed rehabilitation of patients with speech.

2. Both group and individual therapy sessions are available to persons with these disorders.

3. Communications therapy is done under the close supervision of the speech pathologist, aided by physical therapists, occupational therapists, other professional workers, and volunteers.

4. Patients with various speech, voice, and language disorders work together in the group therapy sessions. This has been found to yield better clinical results than segregating the patient according to his problem.

5. The communications therapy program is closely knit into the over-all rehabilitation program for each patient.

6. Work with families and employees is considered an integral part of the rehabilitation program of these patients.

7. Every effort is made to acquaint all hospital personnel with the communications therapy program, its facilities, and its purposes.

8. Careful referrals to available local resources are made when the patients are discharged from the hospital.

*Chief, Physical Medicine and Rehabilitation Service, Veterans Administration Hospital, Oklahoma City, Oklahoma.
**Consultant in Speech Pathology and Rehabilitation, Veterans Administration Hospital, Oklahoma City.
***Social Worker assigned to the Physical Medicine and Rehabilitation Service, Veterans Administration Hospital, Oklahoma City.

The Physiological Fractionation of Pituitary Gonadotropic Factors Correlated With Cytological Changes

A. A. HELLBAUM,* L. G. McARTHUR,** P. J. CAMPBELL*** and J. C. FINERTY****

Endocrinology, **68**: 144-153, Jan., 1961

Removal of estrogen or androgen influence by gonadectomy and the controlled administration of gonadal steroids resulted in regulation of the concentration of follicle stimulating (FSH) and luteinizing (LH) factors in pituitary glands of young adult rats. These physiological changes were corrected with cytologic findings.

Gonadectomy in both sexes results in a marked increase in both LH and FSH in the pituitary as well as a corresponding increase in the red and purple (PAS-Methyl blue staining) pituitary gonadotropes. The administration of the equivalent of 3 mg. of estradiol benzoate per day over a 45-day period stimulates depletion of LH. FSH is also markedly decreased. The cytologic picture shows very few red but some purple gonadotropes. On the other hand, the administration of the equivalent of 3 mg. of testosterone propionate per day over a 45-day period also depletes the LH but the FSH content remains high and the correlated cytological findings show a corresponding decrease in the red gonadotropes, but with little effect on the purple ones. These findings show that FSH and LH can be differentiated by physiologic means and support the concept that the red gonadotropic cells are related to LH production or storage, and the purple ones to FSH production or storage.

*Professor of Pharmacology.
**Captain, U.S.A. Medical Corps.
***Intern, Mercy Hospital.
****Professor of Anatomy, University of Miami School of Medicine.

Profound Experimental Sensory Isolation

JAY T. SHURLEY*

The American Journal of Psychiatry, 117: 539-545, Dec., 1960

A feasible and effective method has been described for studying a wide range of psychophysiologic phenomena under circumstances permitting exceptionally effective isolation and demonstration of discrete elements in the complicated, interconnected patterns and sequences underlying even the simplest human act or experience.

A number of hypotheses relating to very fundamental issues can be erected from these observations and can be subjected to experimental testing. In due course, such experiments may contribute to a more adequate understanding of human behavior.

*Professor of Psychiatry, Neurology, and Behavioral Sciences.

FACULTY NEWS

Faculty Appointments Made By Board of Regents

James A Merrill, M.D., former assistant professor of Gynecology and Obstetrics and assistant clinical professor of pathology at the University of California School of Medicine, San Francisco, has been appointed full time head of the Department of Gynecology and Obstetrics.

MERRILL

In other action by University Regents involving administration of medical school departments:

ONE—Phyllis E. Jones, M.D., associate professor of dermatology, was named chairman of the Department of Dermatology, succeeding the late John Lamb, M.D. Doctor Jones, a 1940 OU medical graduate, was associated with Doctor Lamb in the Lain-Lamb-Jones Clinic in Oklahoma City. She took her residency training at the University of Virginia Hospitals and also received a Master of Science degree in dermatology at Virginia.

TWO—Thomas H. Miley, D.D.S., B.S.D., assistant professor of dental surgery, became acting chairman of Dental Surgery, assuming the position while A. R. Drescher, D.D.S., is on temporary leave from administrative duty. Doctor Miley, a Baylor graduate, is a former University Hospitals resident.

The new chief of Gynecology and Obstetrics, Doctor Merrill, also holds the appointment of professor of gynecologic and obstetric pathology. He received his M.D. Degree at the University of California, took residency training in pathology at Cleveland City Hospital, Boston Lying-In Hospital and the Free Hospital for Women, and served three years as chief Ob-Gyn resident at the California Medical Center.

The physician was supervisor of the Pathology Research Laboratory of California's Cancer Research Institute. He is a Markle scholar.

Other recent faculty appointments include:

T. Glyne Williams, M.D., state director of mental health, associate professor of psychiatry and of preventive medicine and public health; Forrest L. Scharf, M.D., completing a residency in pathology at the Medical Center, assistant professor of pathology; Samuel Edward Dakil, M.D., McAlester, instructor in otorhinolaryngology; Joseph Valadares, Ph.D., former research fellow in the Department of Pharmacology, instructor in research pharmacology; Klaus Jensen, M.D., postdoctoral fellow in the Department of Microbiology, instructor in medicine; Earl Edgar Smith Jr., M.D., Tulsa general practitioner, junior clinical assistant in medicine; T. A. Kutkam, M.D., research assistant at the Oklahoma City VA Hospital, research associate in pathology.

Special Article

Preliminary report on needed improvements in the facilities of Tulsa's Children's Medical Center.

Care of Children With Emotional Problems

JOHN L. BYRNE*

THE POTENTIAL for recovery from mental illness has increased many fold in the last few years. Modern methods of treatment are making it possible to restore an increasing number of mental patients to their homes and jobs. Children with emotional problems which interfere with their ability to function at school, in the home, and within the community, can receive much better scientific treatment than they could just a few years ago.

A patient's chances of recovery are largely dependent upon the quality of the mental hospital or clinic to which he is admitted. At the present time about forty-five per cent of the patients admitted to the average mental hospital are eventually discharged as improved or recovered. In a few well equipped and well staffed mental hospitals, where patients are given the best and latest treatment, as many as seventy per cent improve or recover.

We discussed in a recent brochure of our Child Guidance Clinic that besides being our most precious heritage children are fascinating individuals. Their growth and development is phenomenal from an original cell to a complex integrated child one hundred and thirty billion fold larger than at conception. During this period of tremendous growth, a vast number of adjustments are made to life situations, parents, siblings, school, church and a myriad of other influences. Sometimes undue stress in one or more areas may require that children receive some expert professional counseling and guidance to overcome certain obstacles.

Tulsa Child Guidance Clinic provides the outpatient facilities to care for many of these emotional problems within the community. Those children requiring more extensive psychotherapy and other assistance are able to utilize the facilities of the Children's Medical Center inpatient hospital for intensive medical and psychiatric treatment.

Two of the most significant factors in the recovery of a mentally ill child are: (1) The age of the child and (2) Duration of the illness prior to hospitalization. The younger the patient when the disease strikes and the more quickly he starts receiving treatment, regardless of age, the better are the chances

*Administrator, Children's Medical Center, Tulsa, Oklahoma.

of recovery. The volume of children requiring such services has far outstripped our ability to provide them.

More than sixteen million Americans, one in every ten are suffering from a mental or emotional disorder. A recent survey conducted by the Commission on chronic illness bears out the incidence of mental disorder to be one in ten. They warn that "Our findings that approximately one-tenth of an urban population have one or more of a rather well defined mental disorder is sufficiently alarming and one obviously calling for serious and prompt consideration."

At the present time, one out of every ten children born each year will need to go to a mental hospital sometime during his life time. Twenty years ago this rate was one in twenty. Approximately seven hundred and fifty thousand people are under care in mental hospitals at this moment. This is as many patients as are in all other general and special hospitals combined.

There will be more than two hundred and fifty thousand people, one quarter of a million, admitted to mental hospitals for the first time this year. In addition to this number, approximately one hundred thousand more patients will return to mental hospitals as re-admissions.

During the last few years, there has been an average of two and one-half million men, women and children treated for some form of mental disorder in either mental hospitals, psychiatric clinics, or by private psychiatrists. Mental disorder is an important factor in fifty to seventy per cent of the medical cases treated by physicians.

Children and teen agers have a high incidence of mental illness. At least two hundred thousand children each year receive treatment for less serious disorders in mental health clinics throughout the country. Approximately five thousand children and young people under nineteen years of age are admitted to state mental hospitals each year. There are approximately forty residential treatment centers providing care for two thousand five hundred children with serious emotional disturbances.

Recently a committee of the American Psychiatric Association which provides states with an inspection service of mental hospitals reports that of one hundred and fifty-three mental hospitals inspected by their committee, only fifteen merited approval, thirty-six merited conditional approval, and the other one hundred and two did not even meet the minimum standards of safety and quality. There are approximately twelve hundred clinics in the entire United States. About half of these give only part time service. Based on one clinic for every fifty thousand population as an optimum figure, there is a need for at least thirty-three hundred full time clinics.

In Oklahoma in 1958, there were 334.4 patients per hundred thousand population in mental hospitals. Our mental hospitals had 47.8 per cent of the physician staff necessary to properly treat the patients. There were 1.9 professional personnel per hundred patients. There were 2.8 psychiatrists per hundred thousand people in the Oklahoma population. There was an average per capita expenditure for mental hospitals of $3.52. Compare this with an average per capita expenditure of Children's Medical Center in 1959 of $27.20. There was an average per capita expenditure for community program of four cents. One and ninety-six hundredths per cent of all general state expenditures was for hospital expense. Twenty-five per cent of this figure was for mental hospitals and mental health.

In the material prepared for the White House Conference on Children and Youth, there were many interesting comments regarding the needs for increased services for mental health of children. Reference was made to the fact that long waiting lists for Child Guidance Clinics were customary even for new clinics which had not as yet opened their doors. Residential treatment centers offering high standards of service found more applications for admissions than they could process. The number of trained staff available to work with children was proportionately less even though there were additional staff people in the field because of this tremendous growth in application for service. The National Association for Mental Health noted that although there were

over 3,700 psychiatrists serving in psychiatric hospitals, an additional 2,800 were needed.

Fifty per cent of all clinics are located in Northeastern states and sixty-seven per cent of these in cities of over fifty thousand population. There are 10,500 psychiatrists in the nation of which 3,825 are in New York State. Seventeen states have fewer than fifty psychiatrists. More than half of the psychiatrists are practicing in fifteen metropolitan areas which contain less than one-third of the nation's people.

One of the most remarkable aspects of improved psychiatric care has been the rapidity with which patients can recover and be returned to the community. These shorter periods of hospitalization have meant that far more patients can be treated in the same facility with the same staff.

The National Association for Mental Health states that with "group care and treatment" fifty per cent of all patients could leave mental hospitals partially or totally recovered. Twenty years ago eighty per cent of the patients admitted to mental hospitals in Philadelphia remained there until they died. But with the advent of new methods of treatment and staff improvements these figures had completely reversed themselves by 1959. Eighty per cent of all patients were being discharged within one year of admission.

Since 11,500 children and youth are admitted to public mental hospitals each year and over 1,400 of them are under fifteen years of age, on any one day 13,500 youth are in hospitals, 1,500 of them under 15 years of age. In addition, there are approximately 2,500 children receiving full time care in forty recognized treatment centers in the United States.

Public Health Psychiatry distinguishes three levels of prevention: (a) Primary (steps to obliviate the occurrence of disease), (b) Secondary (early diagnosis and prompt treatment of disease already present), (c) Tertiary (limiting the disability and fostering the rehabilitation of the incurably ill). Our primary role lies in that of the secondary classification, early diagnosis and prompt treatment of disease already present.

Purposes of the Child Guidance Clinic are three fold: (1) Diagnosis and treatment of emotional problems of children through seventeen years of age. (2) Consultation with physicians, agencies, schools, courts, and institutions to provide assistance and advice regarding psychiatric problems of children. (3) Preventive and educational programs designed to arouse interest and to stimulate community reaction to mental health problems.

The greatest number of children seen in the Child Guidance Clinic have disabilities whose early recognition and prompt treatment will certainly shorten the duration of their illness, reduce discomfort, limit the complications, and minimize the trauma to them and their families. The procedures which we use at the present time include screening through the school teacher, evaluating the services of pre-school clinics and well baby clinics, physician and social agency reports. A major problem in early detention is to overcome public resistance to accepting emotional disturbances in children. Our program will progress much more rapidly with better public understanding. It is also important that we limit our therapy to those children whose problems are most amenable to treatment. It becomes necessary for the staff to be selective in the patients they admit for general treatment and refer to another agency for long term care those children who need it. If it becomes necessary that a child be placed in an inpatient facility for treatment, planning should begin prior to admission for continued community participation upon discharge.

We need to develop increased services in our Child Guidance Clinic which will require additional subsidy support from agencies, state, city and county as well as from private philanthropies. Those children who require separation from their families for a period of time in order to make adjustment should do so in a residential treatment facility which is able to provide the complete program to restore these children to the community as productive individuals. A residential treatment center was clearly defined a few years ago as "residential treatment is therapeutically directed institutional or group care for emotionally disturbed chil-

dren in which all possible ways of helping—casework, education, recreation, planned group life, and psychotherapy—are utilized and integrated into a clinically oriented and directed treatment plan for the individual child." It is not merely the removal of the child to a benign environment where he is available for psychotherapeutic interviews. The essence of residential treatment lies in milieu—in the complement of adult child relationships and experiences which can be clinically manipulated and controlled in the interest of therapy.

Despite the variation in the treatment centers, they all have certain features in common. They all emphasize the importance of daily living experiences, structure and organization of the child's life, the various forms of occupation, recreation and creative experiences. They all utilize education therapeutically, whether on the premises or off in some form of psychotherapeutic effort; and all of them utilize staff in the direct handling of children for relationships or experiences of therapeutically helpful nature.

The Oklahoma White House Conference on Children and Youth in their sub-section under mental health had the following pertinent statements: (1) The State of Oklahoma now has four state hospitals one of which has an active inpatient service for psychotic children. (2) The state also supports two schools for retarded children grossly overcrowded. (3) The only private psychiatric facilities for inpatient care of children in the state, at this time, are in Tulsa. (4) The University Hospital Inpatient Psychiatric Section has only twenty beds and only occasionally is an adult child admitted there for treatment. (5) There are four Child Guidance Clinics in the State all of which have complete, although small, staffs. (6) The University Medical Center has an outpatient clinic for both children and adults. (7) There is one Child Guidance Clinic in the state which has an incomplete staff with only part time psychiatric consultations. (8) There are two juvenile detention homes in the state.

In 1955, a program for the training of psychiatric residents was inaugurated at the University of Oklahoma Medical Center. These residents receive some specialized training in child psychiatry at the guidance centers in the State. There is not a full time program in child psychiatry at the University Hospital at the present time.

The significant problems for the decade ahead pointed out that more training facilities are needed in both the public child guidance clinics and Oklahoma University Medical Center in the training of psychiatrists, clinical psychologists, and psychiatric social workers. Too, there is a desperate need in the State for adequate inpatient facilities for care of disturbed children.

The Children's Medical Center has the unique opportunity to develop one of the most outstanding facilities in the country in the care of children with emotional problems. Our present facility with its outpatient resources, inpatient supplementary services for children needing intensive therapy and the teaching programs instituted through our own staff can grow materially to assist in the program of providing adequate services in the state of Oklahoma for emotionally disturbed children. There have been specific recommendations made for the creation of what are referred to as Child Care Centers. These would include outpatient services, day hospital programming and inpatient services. They would be accountable for providing and securing needed care for the families within their scope of activities. A greater portion of these services are being provided by us at this present time. We feel the need of establishing increased services for a day hospital program. These are children who need more intensive care than they can receive in a one day a week psychotherapeutic session and yet would not require twenty-four hour medical supervision. Often times their rate of recovery would be better if they were able to return to their family in the evening but be able to have the support and assistance of a therapeutically oriented staff during the day. A second aspect which requires considerable thought is that of a half-way house for children who are returning to the community and who need certain supportive care and yet can function quite independently in most of their daily activities. A half-way house could be provided for children who are in a semi-discharged status from

the inpatient facility of Children Medical Center or who are referred to half-way house from state hospitals. They would be able to attend regular school or participate in a job in the community.

The Board of Trustees of Children's Medical Center is seriously considering the establishment of a twenty bed unit for emotionally disturbed children. This program would be particularly adapted to those children from twelve to sixteen years of age. Many children with emotional disturbances under the chronologic age of twelve years could be quite adequately cared for in our present building.

There has been considerable discussion by the Active Medical Staff and the Board regarding the decrease in incidence of long term medical problems which we cared for in the past. Positive statistics are difficult to obtain regarding the decrease in long term care for many medical problems, except that all agencies report a decrease.

The major problem with which we must cope is that of adequate financing of such a program. This will have to be done in several ways: (1) Encourage the legislature to appropriate adequate monies for the support of mental health programs. This would include the subsidy by the state of psychiatric teams to work in child guidance clinic programs. (2) The increase in the reimbursable per diem rate from such agencies as the Crippled Children's Unit of the Department of Public Welfare. (3) The broadening of Blue Cross and other insurance agencies to provide increased coverage for mental illness rather than limiting the coverage as they do at the present time. (4) The development of private philanthropy to assist in financing programming.

As we plan our total growth it becomes essential that we consider just what portion of the mental health problem of the State of Oklahoma can be borne by the Children's Medical Center. As has been mentioned previously, early diagnosis and treatment is essential in recovery. Children who are required to enter state facilities where they cannot receive intensive psychotherapy tend to develop fixed psychotic patterns which will, in many instances, require that they remain hospitalized for the remainder of their lives.

We realize that mental health care is an extremely expensive commodity though we must evaluate whether the expenditure of $5,000 to $10,000 on a single child is not a very modest investment in the future of the patient who can be productive for the rest of his natural life. Patients entering state hospitals even at a nominal per capita cost will require the expenditure of approximately $75,000 to maintain them in a custodial facility for their life span.

During the past few years there has been a tremendous increased interest in emotional maturity, the ultimate goal of mental health, yet it is not a new invention. It has been present since man first found it necessary to relate himself to other people in his struggle for existence.

This is a community problem. It is one in which we all play an important part. We must do all we can to promote emotional growth in ourselves as individuals and to encourage it in those with whom we come in contact. Our everyday attitudes and interpersonal relationships are extremely important in the promotion of good mental health. We cannot give emotional maturity to our children; we must cultivate it. If we provide the proper setting, it will flourish.

20th Anniversary of U.S. Savings Bonds

As a physician you know quite well the importance of milestones in the medical profession, those magnificent discoveries that opened the doors to further research, the conquering of dreaded diseases and the opening of new health vistas to us all. The medical profession proudly points to these milestones year after year.

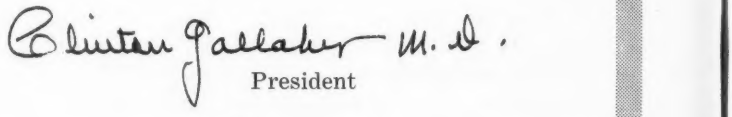
All America has reached another important milestone in 1961—the 20th Anniversary of the United States Savings Bond Program. For 20 years Savings Bonds have done their part in bolstering our nation's economic defense, providing college educations for our young, making down payments on homes, businesses, as well as providing for aid to retirement and other cherished desires.

Yes, all America will be pointing to U. S. Savings Bonds this year: To the Series E with its new 3¾% interest rate and maturity of seven years and eight months. They return $100 for every $75 invested, and you may hold them for 10 years beyond maturity while your bonds continue to increase in value.

The Series H, at the rate of 3¾% when held to maturity, is the current income bond that pays you interest directly by Treasury check every six months. Series E or H make an ideal investment for the doctor. They are not affected by market fluctuations, and they are indestructible. If they are lost or destroyed, you will be issued new securities to replace them. Moreover they are backed by the full faith and credit of the United States.

If you do not already buy bonds through your bank, why not let them set up a program to supply you with a bond every month and charge your account? Many physicians save this convenient way. We hope that in 1961 you will buy an extra amount of U. S. Savings Bonds.

Sincerely yours,



President

CLINTON GALLAHER, M.D.
President

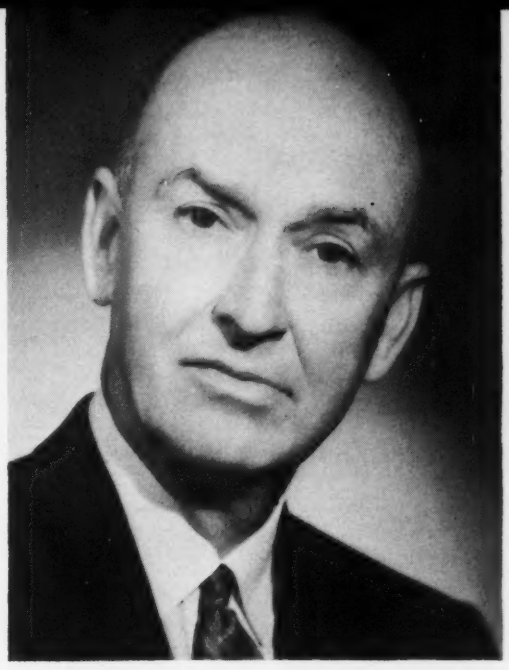
The new President of the Oklahoma State Medical Association, Clinton Gallaher, M.D., Shawnee, steps into the office with an extensive background of experience in the affairs of organized medicine.

Following receipt of his medical degree from Northwestern University in 1929, the Shawnee native married Maudie Bowles and settled down to a lifetime of service to his profession and community, interrupted occasionally by postgraduate courses in his specialty, EENT, which included a 1936-37 residency at the Chicago Eye, Ear, Nose and Throat Hospital.

Doctor Gallaher served an eight year stint, from 1947 to 1955, as Secretary of the Oklahoma State Board of Medical Examiners. He has been a member of the OSMA's Council since 1939, and was Speaker of the House of Delegates from 1952 through 1960, when he was named President-Elect.

Other professional activities include memberships in the Southwestern Surgical Congress, the World Medical Association, and the American College of Surgeons. Long active in civic affairs, Doctor Gallaher is a past-president of the Shawnee Rotary Club.

The Gallahers are members of the First Presbyterian Church, where the doctor has served as both Elder and Trustee.



J. HOYLE CARLOCK, JR., M.D.
President-Elect

Named by the House of Delegates to be Doctor Gallaher's successor next Spring, J. Hoyle Carlock, Jr., M.D., Ardmore, will also provide the association with experienced leadership qualities.

He is a past-president of the Carter-Love-Marshall District Medical Society, has served for ten years as a member of the state association's Council, and has been both Vice-Speaker of the House of Delegates and Vice-President of the OSMA.

Doctor Carlock was born in Ardmore and attended public schools there. In 1935, he was awarded a medical degree from Tulane School of Medicine. At Tulane, he was a member of Nu Sigma Nu and AOA.

Following hospital training in New Orleans and Temple, Texas, he took further postgraduate work at Rotunda Hospital, Dublin, Ireland, and at American University in Vienna.

He married Ardmorite Ruth S. Small, and they have an 18 year-old daughter and two sons, 16 and 20.

His general practice was interrupted for five years while he served as a Lt. Colonel with the 3rd Army, ETO, during World War II. A prominent citizen of Ardmore, he has served on the school board for ten years and is a Steward and Trustee of the First Methodist Church.

ANNUAL MEETING REVIEW

One of the outstanding guests to appear before the House of Delegates was F. J. L. Blasingame, M.D., Executive Vice-President of the AMA, shown here as he outlined the program and objectives of the parent organization. The meeting was attended by 120 representatives of county medical societies.

55th Meeting of OSMA

Despite torrential thunderstorms which placed several state highways under water, more than six hundred physicians arrived in Tulsa for the OSMA's 55th Annual Meeting, May 7-9.

The meeting, under the direction of General Chairman C. S. Lewis, Jr., M.D., and Program Chairman Donald L. Brawner, M.D., was hailed by many as one of the best planned scientific and social outings in association history.

Scientific activities began on Sunday, May 7th, and continued through Tuesday, May 9th, with all sessions held in the Mayo Hotel. The association's Council met on Saturday and the House of Delegates conducted a ten-hour session on Sunday, running simultaneously with the first-day scientific program. Inauguration of President Clinton Gallaher, M.D., Shawnee, was held Monday night during the Inaugural Banquet. Other related events included an association dance on Tuesday evening, two roundtable luncheons and the annual golf tournament.

New Officers

Elected during the House of Delegates meeting were: J. Hoyle Carlock, M.D., Ardmore, President-Elect; Peter E. Russo, M.D., Oklahoma City, Vice-President; Malcom E. Phelps, M.D., El Reno, Delegate to the American Medical Association; and Tom Points, M.D., Oklahoma City, Alternate Delegate to the AMA.

Complete proceedings of the House of Delegates will appear in the July and August issues of *The Journal.*

Assistance to Medical Students

Breaking a long drought in the financial assistance available to the students at the University of Oklahoma School of Medicine, the House of Delegates approved a recommendation of the association's Council on Professional Education, which called for the creation of a scholarship, grant-in-aid and loan fund, to be financed through a $5 annual increase in dues.

The $5 received from each physician (beginning with the 1962 dues) will be split between two separate programs; $3 will be earmarked for the loan program, and $2 for scholarships and grants-in-aid. Over $7,500 would be contributed annually by Oklahoma physicians.

Loans will bear 3% interest beginning one year after the student graduates. Payment must begin within five years after graduation, and must be completed within three years after it is begun.

Scholarships will be awarded to outstanding students, in an effort to encourage and reward excellence. Grants-in-aid will be non-repayable gifts to needy students.

Other Business Actions

In other actions, the House of Delegates:

The AMA leader was flanked by President Walter E. Brown, M.D., and House Speaker Marshall O. Hart, M.D.

• Approved eight regional postgraduate courses for the 1961-62 year, plus the inauguration of an educational television experiment.

• Recommended a program for concerted action at the local level in encouraging high-school students to pursue medical careers.

• Officially endorsed Senate Bill 81 (to provide a Medical Examiner System) and Senate Bill 291 (to provide immunity from civil action when emergency care is rendered at accident site).

• Approved House Bill 829, thereby endorsing the establishment of a dental school in Oklahoma.

• Supported the Council on Insurance's action in recently transferring the group health and accident insurance coverage to the Insurance Company of North America.

• Adopted a plan for completely revising the Blue Shield indemnity payment schedule, and generally recommended an upgrading in Blue Shield coverage, to the extent that all Oklahomans, regardless of the economic environment in which they live, will be able to purchase a prepayment plan which will cover approximately 80-85% of the cost of professional services in their communities.

• Officially opposed the service contract insurance principle.

• Resolved that the AMA should negotiate a modification of the American College of Surgeons' pronouncement against use of the referring physician as surgical assistant.

• Heard Doctor F. J. L. Blasingame, AMA Executive Vice-President, appeal for more grass roots interest and support in the affairs of American medicine. Doctor Blasingame presented a comprehensive appraisal of AMA activities, with particular emphasis on legislative matters.

• Supported a proposed increase in AMA dues, but suggested economies in operations, such as discontinuing the scientific portion of the mid-winter meeting.

• Restated unqualified opposition to the corporate practice of medicine.

• Launched an effort to study ways and means of finding aged persons who are unable to obtain necessary health care through

During the House of Delegates session, State Representative Ed Bradley (right), Tulsa, presented a commendatory resolution from the Legislature to the OSMA, represented by Doctor Brown. The resolution cited the state association and other groups for continued sponsorship of the Governor's Committee on Employment of the Handicapped Essay Contest.

private resources or existing programs; and to provide needed care under association auspices.

• Appealed to the AMA to work with the AAGP in improving general practice residencies.

• Watched outgoing President Brown present an American Medical Education Foun-

dation check for $7,943.82 to Dean Mark R. Everett, Ph.D., University of Oklahoma School of Medicine.

Inaugural Ceremonies

Nearly 500 physicians and their wives attended Monday night's Inaugural Dinner, to pay tribute to outgoing President Walter E. Brown, M.D., and to welcome Clinton Gallaher, M.D., as the new President (Inaugural Address appears on President's Page, this issue). Following inaugural ceremonies, held in the Mayo Hotel's Crystal Ballroom, the sell-out audience was well entertained by the Musical Doctors of Enid, and by Walter (Zaney) Blaney, magician-comedian from Texas.

Annual Dance

A successful innovation in social activities was the separation of the inaugural ceremonies from the annual dance. The dance was held Tuesday evening in the Crystal Ballroom, with the Paul Neighbors Orchestra playing to a capacity crowd.

Once again the singing troupe of doctors from Missouri, The Greene County Medical Society Boys, delighted Oklahomans with their medical parodies of popular songs.

The Program

Nineteen visiting guest speakers and thirteen Oklahoma discussants drew good audiences during the three days of scientific sessions. Eleven outstanding medical movies were shown.

Providing diversion from the scientific program, and one of the outstanding features of the meeting, was a two-hour panel presentation on the "Socio-Economic Problems of Medicine." Prominent participants included T. Dale Alford, M.D., U.S. Representative from Arkansas; Mr. Carl Anderson, National Association of Clinic Managers, Portland, Oregon; F. J. L. Blasingame, M.D., Executive Vice-President, AMA, Chicago; Robert S. Myers, M.D., Executive Assistant Director, American College of Surgeons, Chicago; and, John G. Walsh, M.D., President, American Academy of General Practice, Sacramento, California.

Forty-five scientific and technical exhibits complemented the educational merits of the meeting. Many specialty organizations coordinated their annual meetings with the state association event, some taking advantage of guest speakers of their specialties.

Outgoing President Walter E. Brown, M.D., presented his auxiliary counterpart, Mrs. Virgil Ray Forester, Oklahoma City, with a certificate of appreciation from the OSMA.

The annual Physicians Hobby Show provided an outstanding change-of-pace contribution to the exhibit section of the meeting. More than thirty medics displayed the products of their pastime talents.

Golf

Perennial tournament winner E. Malcolm Stokes, M.D., Tulsa, once again captured the low gross trophy, with a well-played 76 on Tulsa's rain soaked Oaks Country Club course. The low net trophy also went to a Tulsan, William M. Benzing, Jr., M.D., who carded a score of 77.

This year's tournament was planned by a committee headed by James W. Kelley, M.D., Tulsa. Trophies through the donations of fourteen Tulsa druggists were presented to Doctors Stokes and Benzing during intermission at Tuesday night's dance.

Auxiliary Elects

The Woman's Auxiliary conducted another outstanding annual meeting in conjunction with the principle event. Mrs. Virgil Ray Forester, Oklahoma City, turned over the reins of the distaff group to incoming President, Mrs. W. Pat Fite, Sr., Muskogee. Other officers elected were: Mrs. Milton L. Berg, Tulsa, President-Elect; Mrs. Peter A. MacKercher, Ponca City, First Vice-President; Mrs. Tom C. Sparks, Ardmore, Second Vice-President; Mrs. Charles W. Freeman, Oklahoma City, re-elected Secretary; Mrs. Louis S. Frank, Oklahoma City, Treasurer; and Mrs. C. F. Foster, Jr., Oklahoma City, Treasurer-Elect.

Councils, Committees Announced for 1961-62

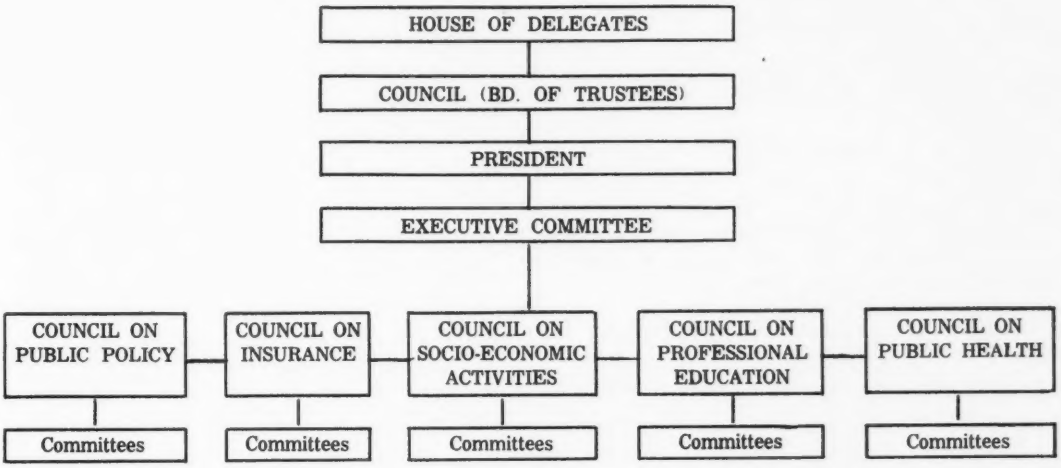
President Clinton Gallaher, M.D., has completed the appointments to the Councils and Committees of the OSMA for his term of office.

The experimental use of five Councils, and the grouping of Committees under these Councils, was officially endorsed at the 55th Annual Meeting, upon recommendation of outgoing President Walter E. Brown, M.D.

Plans are now under way to prepare the necessary amendments to the Constitution and Bylaws, thereby officially changing the nomenclature of the various elements of the organizational structure.

Below, and on the following pages are listed the current personnel assignments. Further appointments to certain committees are contemplated.

ORGANIZATIONAL STRUCTURE



Standing Committees

EXECUTIVE

Clinton Gallaher, M.D., Shawnee, Chairman
Walter E. Brown, M.D., Tulsa
Peter E. Russo, M.D., Oklahoma City
J. Hoyle Carlock, M.D., Ardmore
Mark R. Johnson, M.D., Oklahoma City
Wilkie D. Hoover, M.D., Tulsa

SCIENTIFIC WORK

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Marcus S. Barker, M.D., Oklahoma City
Mark A. Everett, M.D., Oklahoma City
W. Pat Fite, Sr., M.D., Muskogee
Bert F. Keltz, M.D., Oklahoma City
R. W. King, M.D., Oklahoma City
James Murphree, M.D., Ponca City
G. R. Russell, M.D., Tulsa
William T. Snoddy, M.D., Oklahoma City
Paul T. Strong, M.D., Tulsa
Robert T. Sturm, M.D., Oklahoma City
Karl F. Swanson, M.D., Tulsa

CREDENTIALS*

C. Riley Strong, M.D., El Reno, Chairman
William R. Cheatwood, M.D., Duncan
Charles E. Wilbanks, M.D., Tulsa

CONSTITUTION and BYLAWS

E. C. Mohler, M.D., Ponca City, Chairman
E. K. Norfleet, M.D., Bristow
Louis H. Ritzhaupt, M.D., Guthrie

GRIEVANCE

R. Q. Goodwin, M.D., Oklahoma City, Chairman
John F. Burton, M.D., Oklahoma City
E. C. Mohler, M.D., Ponca City
A. T. Baker, M.D., Durant
Walter E. Brown, M.D., Tulsa

*Current appointments, until January, 1962.

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Thomas C. Points, M.D. — Oklahoma City
John E. McDonald, M.D. — Tulsa
Elmer Ridgeway, M.D. — Oklahoma City
M. H. Newman, M.D. — Shattuck
William A. Matthey, M.D. — Lawton

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Orange M. Welborn, M.D., Ada
M. H. Newman, M.D., Shattuck
Louis H. Ritzhaupt, M.D., Guthrie
Ceylon S. Lewis, Jr., M.D., Tulsa

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Tom S. Gafford, M.D., Muskogee
J. Hoyle Carlock, M.D., Ardmore
Paul B. Lingenfelter, M.D., Clinton
J. R. Stacy, M.D., Oklahoma City
E. H. Shuller, M.D., McAlester
William A. Matthey, M.D., Lawton
Paul Gallaher, M.D., Shawnee
Francis A. Davis, M.D., Shawnee

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William N. Harsha, M.D., Oklahoma City
Robert O. Ryan, M.D., Norman
Cody Ray, M.D., Pawhuska

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Ralph Smith, M.D. — Oklahoma City
William S. Dandridge, M.D. — Muskogee
W. R. Cheatwood, M.D. — Duncan
Edwin C. Yeary, M.D. — Ponca City
Dave Lhevine, M.D. — Tulsa

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Curtis Berry, M.D., Norman
W. A. Matthey, M.D., Lawton
Dave Lhevine, M.D., Tulsa
H. A. Ruprecht, M.D., Tulsa
Rex E. Kenyon, M.D., Oklahoma City

Group Insurance

Edwin C. Yeary, M.D., Ponca City, Chairman
Clarence B. Dawson, M.D., Oklahoma City
Horton E. Hughes, M.D., Shawnee
Curtis Cunningham, M.D., Clinton
C. D. Cunningham, M.D., Ardmore

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Chairman

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Gregory E. Stanbro, M.D. — Oklahoma City
John R. Taylor, M.D. — Kingfisher

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Hillard E. Denyer, M.D., Bartlesville

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Charter for European Study

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Marvin B. Glismann, M.D., Oklahoma City
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Gifford H. Henry, M.D.
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Vance Bradford, M.D., Oklahoma City
James Dewar, M.D., Oklahoma City

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G. R. Russell, M.D., Tulsa
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R. G. Obermiller, M.D., Woodward
John G. Rollins, M.D., Prague

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of the
OKLAHOMA STATE MEDICAL ASSOCIATION
1961-62

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PRESIDENT-ELECT—J Hoyle Carlock, Jr., M.D., Ardmore

VICE PRESIDENT—Peter E. Russo, M.D., Oklahoma City

PAST PRESIDENT—Alfred T. Baker, M.D., Durant

PAST PRESIDENT—Walter E. Brown, M.D., Tulsa

SECRETARY-TREASURER—Mark R. Johnson, M.D., Oklahoma City

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ALTERNATE DELEGATE TO THE A.M.A.—Thomas C. Points, M.D., Oklahoma City

DELEGATE TO THE A.M.A.—Wilkie D. Hoover, M.D., Tulsa

ALTERNATE DELEGATE TO THE A.M.A.—Joe L. Duer, M.D., Woodward

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VICE SPEAKER OF THE HOUSE OF DELEGATES—C. M. Hodgson, M.D., Kingfisher

EDITOR-IN-CHIEF—Ben H. Nicholson, M.D., Oklahoma City

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Bartlesville

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Perry
G. B. Gathers, Jr., M.D.
Stillwater

DISTRICT #3

James Petty, M.D.
Guthrie
Avery B. Wight, M.D.
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DISTRICT #4

Walter H. Dersch, Jr., M.D.
Shattuck
John X. Blender, M.D.
Cherokee

DISTRICT #5

Ross Deputy, M.D.
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C. Riley Strong, M.D.
El Reno

DISTRICT #6

Vernon D. Cushing, M.D.
Oklahoma City
E. E. Shircliff, M.D.
Oklahoma City

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C. C. Young, M.D.
Shawnee
E. K. Norfleet, M.D.
Bristow

DISTRICT #8

Wendell L. Smith, M.D.
Tulsa
Earl M. Lusk, M.D.
Tulsa

DISTRICT #9

Francis R. First, M.D.
Checotah
Burdge F. Green, M.D.
Stilwell

DISTRICT #10

Thurman Shuller, M.D.
McAlester
C. E. Lively, M.D.
McAlester

DISTRICT #11

Thomas E. Rhea, M.D.
Idabel
W. A. Hyde, M.D.
Durant

DISTRICT #12

Ennis M. Gullatt, M.D.
Ada
M. E. Robberson, M.D.
Wynnewood

DISTRICT #13

John B. Miles, M.D.
Anadarko
W. R. Cheatwood, M.D.
Duncan

DISTRICT #14

J. B. Hollis, M.D.
Mangum
R. R. Hannas, M.D.
Sentinel

Seventh Annual Southeastern Oklahoma Clinical Symposium

Highlighting summertime scientific activities in Oklahoma will be the Seventh Annual Southeastern Oklahoma Clinical Symposium, slated for July 29th in the Aldridge Hotel, McAlester.

The popular refresher course is jointly sponsored by the McAlester Clinic Foundation and the Department of Postgraduate Education of the University of Oklahoma School of Medicine.

Guest speakers and their subjects are: Jeanne C. Bateman, M.D., Washington, D.C., — "Non-Surgical Management of Malignancy"; Edwin C. Jungck, M.D., Augusta, Georgia — "Sensible Hormone Therapy"; George A. Constant, M.D., Victoria, Texas —"Getting Along With Our Adolescents"; James B. Donaldson, M.D., Philadelphia, Pennsylvania—"Medical Evaluation of Pre-Operative Patients"; and, John Todd Reynolds, M.D., Chicago, Illinois—"Diagnosis and Management of Abdominal Emergencies."

Two panel discussions will also be held. The first, moderated by Tom S. Gafford, M.D., Muskogee, will cover the subjects of Doctors Bateman and Jungck. The second, moderated by Merlin K. Duval, M.D., Oklahoma City, will include the topics of Doctors Donaldson and Reynolds.

A social hour and dinner are planned for Saturday evening, at which time entertainment will be supplied by Seymour Davis, Oklahoma City entertainment bureau. Program plans also include special events for the ladies.

Registrants will be entitled to Category II credit from the American Academy of General Practice. There will be no registration fee, since the meeting will be sponsored by Lederle Laboratories.

Advance reservations are encouraged. They may be made by contacting Jewell M. Green, Jr., Business Manager, McAlester Clinic, McAlester, Oklahoma.

'Anderson-King' Hearings Due Soon

House Ways and Means Committee Chairman Wilbur Mills (D., Arkansas) has announced that extended public hearings on the Anderson-King bill (H.R. 4222) will begin in late June or early July.

The measure proposes providing health care to Social Security recipients through an amendment to Title II of the Social Security Act. Hospital care and certain professional services for the 14.5 million persons involved would be financed by increasing payroll deductions of employees by ¼ of 1% and by increasing employer contributions by a like amount. The base for taxation would also be increased, from the present $4800 annually to $5000 annually.

In brief, here's what the legislation would do:

- First, it would provide inpatient hospital services up to 90 days in a single spell of illness for all costs in excess of $10 per day for the first nine days (with a minimum of $20) and full costs for the remaining 81 days.
- Second, it would provide skilled nursing home services up to 180 days immediately after discharge from a hospital, to provide an incentive for use of these less expensive facilities. An individual could receive two days of skilled nursing home care in place of one day hospital care.
- Third, it would provide hospital outpatient clinic diagnostic services for all costs in excess of $20.
- Fourth, community visiting nurse services and related home health services for a limited period of time would be provided (up to 240 visits annually).

The services of physicians salaried by hospitals would also be compensable.

Kerr-Mills Preferred

The American Medical Association and other groups are opposing H.R. 4222 on the basis that the recently enacted Kerr-Mills Bill makes it unnecessary. They point out that the arbitrary use of the Social Security system as a vehicle for providing health care does not take into consideration whether or

not the recipient needs financial assistance to obtain necessary care. On the other hand, the bill would deny coverage to those not on Social Security rolls, who presumably need help the most.

H.R. 4222 is believed to be a serious threat to the free practice of medicine and, in the long run, will undoubtedly lessen the quality of care available. Future expansion of the benefits and the scope of coverage will result in the socialism of health care for the general citizenry.

State medical associations and county medical societies are being encouraged to prepare resolutions in opposition to H.R. 4222. County societies should send their resolutions to the OSMA Executive Office, Box 9696, Oklahoma City, where they will be collected and forwarded on to Representative Mills.

Resolutions from other interested organizations are also requested.

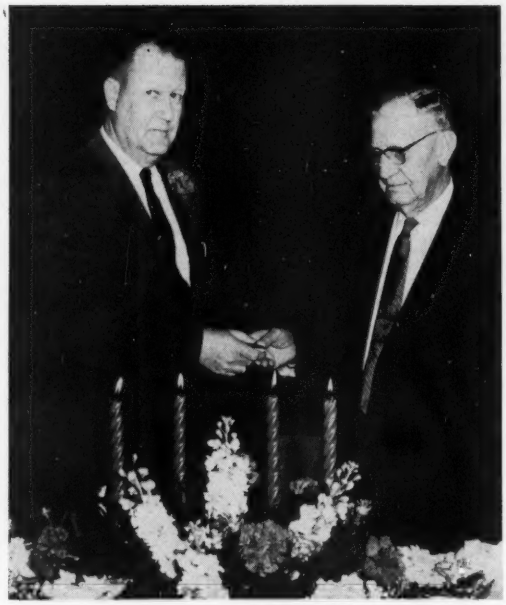
Heart Association Names Officers

Election of officers for the Oklahoma Heart Association was the highlight of the health group's annual meeting held in Tulsa on May 13.

Howard Cowan of Tulsa was elected president. Serving with him are E. C. Mohler, M.D., Ponca City as president-elect, and three vice-presidents: W. D. Finney, Fort Cobb; Hugh O. Davis, Shawnee; and W. N. Weaver, M.D., Muskogee. Secretary is John V. Morgan of Oklahoma City, and re-elected as treasurer is Joe W. McBride, Oklahoma City.

Re-elected as directors for three year terms are Ray Graybill, M.D., Ardmore; Dave J. Stevens, Durant; W. W. Blackburn, Elk City; W. D. Finney, Fort Cobb; Joe W. McBride, Oklahoma City; Jerome D. Shaffer, M.D., Oklahoma City and Gerdie R. Hurd, Stilwell.

Two delegates to the AHA were also named. They are E. C. Mohler, M.D., Ponca City and Wm. Best Thompson, M. D., Oklahoma City. Alternates are: Ray Graybill, M.D., Ardmore; Howard Cowan, Tulsa; W. N. Weaver, M.D., Muskogee; F. Redding Hood, M.D., Oklahoma City; Stewart Wolf, M.D., Oklahoma City, and John V. Morgan, Oklahoma City.



Thomasson Receives Fifty-Year Pin

At the March 28th meeting of the Stephens County Medical Society, E. B. Thomasson, M.D., Duncan physician (pictured right), was presented a Fifty-Year Pin by the Oklahoma State Medical Association in recognition of his devotion to the profession for half a century. Shown presenting the award to Doctor Thomasson is R. H. Mayes, M.D., President of the county group. Doctor Thomasson is the fourth Duncan physician to receive the award. Others are James Patterson, M.D., Fred Patterson, M.D., and Wallis Ivy, M.D.

Charter Flight to Europe Planned

A committee of the Oklahoma State Medical Association is preparing to arrange a chartered flight to Europe, provided a sufficient number of association members and their immediate families make reservations.

The committee is composed of Frances F. Newlin, M.D., Shawnee (Chairman), Francis A. Davis, M.D., Shawnee, M. B. Glismann, M.D., Oklahoma City, and E. R. Shapard, M.D., Tulsa.

Arrangements presently call for an "off season" flight, originating in Oklahoma City and Tulsa and proceeding to London and Paris. If the airplane can be filled to near-capacity, the roundtrip fare may be kept below $300 per person.

Physicians interested in the trip should contact Doctor Newlin, Masonic Building, Shawnee.

Pictured during the annual meeting of the President's Committee on Employment of the Handicapped are (left to right): Voyle Scurlock, Director, Vocational Rehabilitation, Oklahoma City; Don Davis, Executive Secretary, Governor's Committee, Oklahoma City; Representative Lou Allard, Drumright; Representative Harold Morgan, Vinita; Senator Charles E. Colston, Marietta; Senator Ralph Graves, Shawnee; Representative Grant Forsythe, Tulsa; Walter E. Brown, M.D., then President of the Oklahoma State Medical Association, Tulsa; U.S. Senator Mike Monroney; Ted Wheaton, Tinker Air Force Base, Oklahoma City; Representative William Burkett, Woodward; Ralph Bethel, President, Oklahoma Lions Eye Bank, Tulsa; Emil Marcus, Frederick; Congressman Victor Wickersham, Mangum; Sharon Davis, National Essay Winner, Oklahoma City; John Meek, Assistant to Senator Robert S. Kerr; M. E. Fariss, Sayre; Doris Taylor, English Teacher, Northwest Classen High School, Oklahoma City; Len Yarborough, AFL-CIO, Tulsa; Esther Robinson, Executive Secretary, Oklahoma Council of Teachers of English, Oklahoma City; and, Representative Henry Dolzeal, Perry.

'Handicapped' Event Opens Hearts

Opening the heart without surgery is possible. It was done for Doris Taylor of Oklahoma City in April, 1961.

It all started when Sharon Davis, one of her pupils at Northwest Classen High School, won first place in the state contest, and fourth in the national contest entitled, "Hire the Handicapped — A Community Challenge." Many state organizations, such as the Oklahoma Association of Insurance Agents, Associated Industries of Oklahoma, veterans organizations, Business and Professional Women's Clubs, federal agencies, and others, provided awards to the winners of the contest. The State AFL-CIO provided an expense-paid trip for Sharon, and the Oklahoma State Medical Association provided an expense-paid trip for Miss Taylor, teacher of the first-place winner, to attend the annual meeting of the President's Committee on Employment of the Handicapped.

At a huge meeting, with representatives from 50 states and many foreign countries, Doris Taylor had the opportunity to see one of her students receive an award from Robert F. Kennedy, Attorney General of the United States, for having placed fourth in the national essay contest sponsored by the President's Committee.

The Oklahoma State Medical Association, in providing the expense-paid trip for Miss Doris Taylor to accompany her student to this all important meeting, provided a most thrilling and exciting experience.

In addition to the usual sightseeing, fascinating enough in itself, Sharon and Miss Taylor had many other invaluable opportunities. For example, it was a thrilling moment when the governor of Michigan strode to the platform, with no assistance and without a cane or crutch, after the chairman had just announced that the governor had two artificial legs. It was most inspiring to watch Harold Russell, hero of the World War II movie, "Best Years of Our Lives," settle his glasses over his ears and to hear him say casually, "You see, I'm handicapped—I have to wear glasses"—when he was putting his glasses on with two hooks which he uses for hands. Distressing as it was to see General Maas, elderly and blind chairman of the President's Committee, collapse while speaking, it was a wonderful example of dedication to one's country, to a cause, to know that he regards his

job as important enough to make him come to the meeting though he was ill enough to stay home.

It was most satisfying to note that Oklahoma's delegation was one of the largest at the convention. Doctor Walter Brown, then President of the Oklahoma Medical Association; Miss Esther Robinson, Executive Secretary of the Oklahoma Council of Teachers of English; legislators, and representatives from Labor, Industry, and Insurance; Don Davis, Executive Secretary of the Governor's Committee; Virgil Carter, a photographer from Oklahoma City's Goodwill Industries, and others, made an impressive appearance for the Sooners.

Oklahoma was the only state singled out for recognition at the luncheon, where forty-five high school young people were given awards for winning first place in their respective states with their essays. State Legislators and the Oklahoma Governor's Committee were commended heartily by the Chairman, Mr. Gordon Freeman.

Muskogee Postgraduate Course Attended by 46

The OSMA'S final regional postgraduate course of the year, held April 18 at the Muskogee General Hospital, drew the largest registration of any of the previous meetings, with forty-six physicians attending the four-hour late afternoon and evening conference.

Speaking on various aspects of the basic science, diagnostic and therapeutic considerations of the Kidney were: John P. Colmore, M.D., Robert Lindeman, M.D., and W. O. Smith, M.D., all of the University of Oklahoma Medical Center.

Through an action of the House of Delegates, the regional courses will be resumed next fall on a one-a-month basis, beginning in September.

Registrants

Those attending the Muskogee meeting were: R. L. Alexander, M.D., Okmulgee; G. L. Berkenbile, M.D., Muskogee; Don Bernamonti, M.D., Muskogee; Bruce Brown, M.D., McAlester; George Brown, M.D., McAlester; W. L. Bynum, M.D., Muskogee; Ron Cagle, M.D., Tulsa; Charles A. Cashman, M.D., Okemah; Jess S. Chandler, M.D., Muskogee; William Z. Cook, M.D., Stilwell; R. L. Currie, M.D., Stilwell; Max A. Deardorff, M.D., Tulsa; Edward H. Fite, Jr., M.D., Muskogee; Joseph Fulcher, M.D., Tulsa; M. C. Gephardt, M.D., Muskogee; Burdge F. Green, M.D., Stilwell; James L. Green, Jr., M.D., Muskogee; B. E. Guenther, M.D., Collinsville; R. R. Hannas, M.D., Sentinel; E. M. Henry, M.D., Muskogee; Thomas Hester, M.D., Muskogee; John Hill, M.D., Tulsa; C. K. Holland, M.D., McAlester; J. M. James, M.D., Muskogee; Maxwell Johnson, M.D., Tulsa; George L. Kaiser, M.D., Muskogee; Don King, M.D., Tulsa; Albert Krause, M.D., Muskogee; E. L. Leonard, M.D., Wagoner; June May, medical student; George Markert, M.D., Tulsa; L. S. McAlister, M.D., Muskogee; Bob G. Mitchell, M.D., Sallisaw; C. T. Morgan, M.D., Tahlequah; William C. Moore, M.D., Wewoka; Bill Morris, M.D., Tulsa; Robert A. Nelson, M.D., Tulsa; C. L. Oglesbee, M.D., Muskogee; Ed L. Pointer, M.D., Sallisaw; Joseph Salamy, M.D., Tulsa; Richard Scott, M.D., Tulsa; C. E. Smith, M.D., Henryetta; G. W. Tracy, M.D., Muskogee; W. N. Weaver, M.D., Muskogee; William S. Womack, M.D., Tahlequah; W. M. Wood, M.D., Muskogee; and, Don Blair, OSMA Associate Executive Secretary.

Have You Heard?

FRANK STUART, M.D., Tulsa, is the new president of the Mid-Central Orthopedic Society. The 1962 meeting of the group will be held in Tulsa.

A. G. WEBER, M.D., Goltry, has been awarded a special service citation from the Executive Committee of the Central South Conference of the Congregational Churches.

C. E. CALHOUN, M.D., Sand Springs physician and Life Member of the Oklahoma State Medical Association, retired March 18, ending 59 years of medical practice in Oklahoma.

HARL N. STOKES, Oklahoma City personnel manager, has been named Executive Secretary of the Oklahoma Chapter, American Academy of General Practice.

House Staff Physicians Hold Annual Meeting

Richard H. Bottomley, M.D., second year resident in medicine at the University of Oklahoma Medical School, won "best paper of the meeting" honors at the seventh annual meeting of the Oklahoma Association of House Staff Physicians May 12 at the Oklahoma City VA Hospital.

He also received the award for the most outstanding paper in the field of internal medicine.

Twenty-two interns and residents presented papers during the one-day program. The house staff men also heard lectures by two guests, Katharine Dodd, M.D., professor of pediatrics at Emory University, and F. John Lewis, M.D., professor of surgery, Northwestern University.

Other awards for top papers in various fields went to: Paul R. O'Bar, M.D., radiology, J. M. Ingalls, M.D., surgery, Hugh C. Graham, Jr., M.D., pediatrics, C. Camak Baker, M.D., neuro-psychiatry, Lloyd E. Rader, M.D., basic science. All are residents at the OU Medical Center.

Edward N. Brandt Jr., intern at the VA Hospital, was cited for presenting the best paper by an intern.

Residents selected to repeat their papers at the annual meeting of the Oklahoma Chapter, American College of Surgeons, were: John H. Tatum, M.D., and Frank Clingan, M.D., both of Hillcrest Medical Center, Tulsa; Doctor Ingalls, Harold H. Mings, M.D., Frank Howard, M.D., and R. C. Emmott, M.D., all of the OU Center.

Howard B. Keith, M.D., third year resident in surgery, was program chairman and will head the association during 1961-62. Serving with him will be John Drake, M.D., second year resident in medicine, program chairman, William Price, M.D., third year resident in surgery, secretary-treasurer, and William Waskowitz, M.D., third year resident in orthopedic surgery, social chairman. All are members of the Medical Center house staff.

Awards were made by the Oklahoma City Chapter, Medical Service Society of America, Oklahoma State Radiological Society, Oklahoma Association for Mental Health, Oklahoma Chapter of American College of Surgeons, Oklahoma Academy of General Practice, Oklahoma City Pediatric Society, General Electric X-Ray Company, Greb X-Ray Company, R. P. Kincheloe Company, Merkel X-Ray Company, Miller X-Ray Company, Fred Knies, and Ansco.

SAMA Names New Officers

James Garner Jr., senior student from Stillwater, is new president of SAMA at the University of Oklahoma School of Medicine. Others elected this spring were Curtis Kimball, Canton junior, vice-president, and John Currie, Sallisaw junior, secretary-treasurer.

Mrs. Jack Harper, wife of a senior from Frederick, was elected Region VI SAMA Auxiliary director at the May convention in Chicago.

Other delegates from the Oklahoma SAMA and Auxiliary were Donald Patrick Ferrell, Amorita, and Larry Young, Ada, both juniors, and Mrs. Rex Baggett, whose husband, a senior medical student, is the outgoing Oklahoma SAMA president. Mrs. Baggett last year served as national Auxiliary second vice president.

CORRECTION, PLEASE!

Despite careful checking of association membership records and the insertion of a correction reply card in the February issue of *The Journal*, it seems inevitable that a few errors will occur in the publication of the Annual Directory of the OSMA. The association staff apologizes for its miscues, and wishes to set the record straight on the following (corrections underscored):

Fagin, Herman '00 Ok-1 '23 I 1200 N. Walker Oklahoma City

Horowitz, Leon '25 NY-19 '52 **Pd-Al** 4926 E 21 Tulsa

[3]Klass, O. C. '88 Ky-2 (Ob) 609 Surety Bg Muskogee

Lachman, Ernest '01 Breslau, Germany '24 **R** 801 N.E. 13 Oklahoma City (erroneously listed as retired)

Wood, Harold C. '30 Tenn-6 '56 **Ob** 208 Med Arts Bg Tulsa

Auxiliary News

Commencement

Evaluation of organizational accomplishment can be considered in the same manner as commencement. Both are, in truth, backward glances—pride in the past, coupled with expectations of the future.

In our Auxiliary commencement, State Convention culminated a year of worthwhile work, reports any state could call successful. Our two Vice-Presidents, Mrs. Milton L. Berg, and Mrs. W. A. Hyde, reported a membership of 1290. At present we have 40 organized counties, with 33 counties having members-at-large (a total of 100 members-at-large). Fourteen counties have 100% membership; and two districts, 11 and 13, have 100% membership. What a remarkable report!

Oklahoma is also proud of collecting a total of $2,003.17 for the American Medical Education Foundation. Members are gradually realizing how dollars can mount; and our State Chairman, Mrs. F. H. McGregor, has enthusiastically called our attention to future growth and possibilities of aiding our medical schools.

We wish for space, to give complete reports on the work of each committee. Watch for results of our year's progress in the next issue of *The Sooner Physician's Wife.*

Mrs. Harlan English, President-Elect of the Woman's Auxiliary to the AMA, gave us the theme for the year in the May issue of the national *Bulletin.* Her speech to the general convention elaborated this theme: Strive to make the helping hands of the doctor's wife reflect and enrich the doctor's dedicated service to mankind. One quote from her article, on which she elaborated in her speech, contains a worthwhile guide for all of us to consider: "Any progress must be nourished by right purpose, full knowledge, thoughtful planning, and honest effort."

Pages could be written about Tulsa's hospitality. We express our deep appreciation to Mrs. Eric M. White, Convention Chairman, and to Mrs. Dick Huff, Co-Chairman, for the fabulous luncheon and fashion show (poodles were the theme and naively "stole the show"). We are also grateful to every person who assisted with every event.

New Officers

Our newly-elected officers for 1961-62 are:

President—Mrs. Pat Fite, Sr., Muskogee;

President-Elect—Mrs. Milton L. Berg, Tulsa;

First Vice-President—Mrs. Peter A. MacKercher, Ponca City;

Second Vice-President — Mrs. Tom C. Sparks, Ardmore;

Secretary — Mrs. Charles W. Freeman, Oklahoma City;

Treasurer—Mrs. Louis S. Frank, Oklahoma City;

Treasurer-Elect—Mrs. C. F. Foster, Jr., Oklahoma City.

Finale

As we welcome our new officers and chairmen and wish them a rewarding year in Auxiliary work, we also wish to express our sincere gratitude to Mrs. Virgil Ray Forester, our outgoing President, and to the officers and chairmen of 1960-61. Anne Morrow Lindbergh said, "One can never pay in gratitude; one can only pay 'in kind' somewhere else in life." We hope that with our Auxiliary members, individual appreciation to our outgoing officers will be shown by constantly renewed interest in our important Auxiliary projects.

Deaths

ROSCOE C. BAKER, M.D.
1882-1961

A prominent Enid physician, Roscoe C. Baker, M.D., died April 18, 1961. The 78-year-old pioneer Oklahoman had been active in medical, civic and military activities since coming to Oklahoma in 1904.

A native of Clarksdale, Missouri, Doctor Baker graduated from Ensworth Medical College, St. Joseph, Missouri. After practicing in Covington, Granite and Arcadia, he moved to Enid in 1920, where his practice was interrupted only by his military service. He was instrumental in organizing the 189th field artillery which later became Oklahoma's 45th Division. Although serving primarily as a medical officer, he helped organize the *45th Division News* and served as member of the original staff.

A Past-President of the Garfield-Kingfisher County Medical Society, Doctor Baker was serving as Editor of the *Bulletin* which he founded twenty-seven years ago, and as Secretary-Treasurer of the society at the time of his death.

In 1959, the Garfield-Kingfisher Medical Society established the R. C. Baker Student Loan Foundation, simultaneously honoring Doctor Baker for the meritorious service which he had rendered to his society for many years and designing a plan to serve worthy medical students.

Recognizing his devoted service to the medical profession, the Oklahoma State Medical Association had presented Doctor Baker with dual honors—an Honorary Membership in 1953 and a Fifty Year Pin in 1955.

ROBERT Z. TAYLOR, M.D.
1884-1961

Robert Z. Taylor, M.D., pioneer physician of Blair, died on April 28, 1961.

A native of Tennessee, Doctor Taylor came to Blair to practice in 1909 after graduating from Vanderbilt University School of Medicine in 1908.

Doctor Taylor's Honorary-Life Membership in the Oklahoma State Medical Association was presented to him in 1959 in recognition of his devotion to the profession for more than half a century.

HOWE KING RIDDLE, M.D.
1890-1961

A pioneer Coweta physician, Howe King Riddle, M.D., died April 12 in Rockdale, Texas, his native home.

A graduate of Eclectic Medical College, Cincinnati, Ohio, in 1913, Doctor Riddle practiced in New Mexico before moving to Coweta in 1919.

In addition to his private practice, Doctor Riddle served as Wagoner County Health Officer at one time and later was Mayor of Coweta.

JAMES O. HOOD, M.D.,
1907-1961

James O. Hood, M.D., Director of the Student Health Service at the University of Oklahoma since 1946, died May 5, 1961 in Oklahoma City.

Born in Breckenridge, Texas, Doctor Hood graduated from the University of Oklahoma School of Medicine in 1931. After engaging in private practice in Norman from 1931 until 1938, he became Cleveland County Health Director. During this period, he also served as Mayor of Norman for three years. A Lieutenant Colonel in the Medical Corps of the 45th Infantry Division during World War II, he returned to Norman and assumed his duties at the university in 1946.

The Southern Medical Association, the American Public Health Association and the American Academy of General Practice were among the organizations in which Doctor Hood held memberships.

25 YEARS AGO

Articles published in *The Journal* of the Oklahoma State Medical Association, June, 1936.

THE MORTALITY OF ACUTE APPENDICITIS
Consideration of Preventive Measures

HORACE REED, M.D.
Oklahoma City

In a paper presented before the Academy of Medicine in November, 1932, the opening statement is as follows: "Acute appendicitis is a curable disease. If the proper remedy is applied before the inflammation spreads beyond the appendix, the cures should amount to one hundred per cent."

That statement was based on the limited experience and observation of the author. Acute appendicitis, however, occurring as it may in those who have disassociated but serious lesions, will still command treatment. These disassociated lesions may, in certain instances, be of such nature as to make surgical procedures hazardous in themselves. It follows, therefore, that while the statement above quoted may be still true in selected cases, there are complications which will eventually bring about a mortality in simple acute appendicitis.

In the January number, 1936, of Archives of Surgery, Schullinger publishes a paper in which he gives the results of acute appendicitis and associated lesions, over a period of eighteen years, in the Presbyterian Hospital of New York. Schullinger's analysis of these cases is, to me, the most enlightening expose of the subject that has ever come to my attention. His studies and his statistics have largely furnished the inspiration by which I undertake to present this paper.

Schullinger divides appendicitis into five groups. The first group is acute appendicitis without associated lesions, and he gives his definition as follows: "An acute inflammatory process confined almost entirely to the appendix in whole or in part." Out of a total of 2,653 cases 1,175 fall into this group. The number of deaths in the 1,175 cases were seven or a mortality of .59 per cent.

In group two, there were 630 cases with twelve deaths. Group two is acute appendicitis with acute local peritonitis. The mortality in this series was 1.9 per cent. Studied in progressive five year periods there is a distinct falling of the mortality rate in this group. In the 1918 to 1922 period, the rate was almost four per cent. It was more than three per cent in the 1920 to 1924 group, but from there on there is a steady decline to the 1929 to 1933 group, in which the mortality was less than one per cent. This indicates that during this eighteen year period, there has been a definite progress made in the treatment of appendicitis associated with local acute peritonitis in the Presbyterian Hospital.

The third group is acute appendicitis with peritoneal abscess. In this group there were 571 cases, total number of deaths sixty, per cent rate is 10.5. Taking again the progressive five-year period, we find that the death rate in 1918 to 1922 was fourteen per cent. The period from 1925 to 1929 was the least, having declined from the previous period to less than eight per cent; but from this group forward to the last period, namely from 1929 to 1933, it rapidly rose and in the last period it was 12 per cent; showing that at least during the last several years no progress had been made, but rather a loss had been sustained.

Group four is acute appendicitis with acute diffuse spreading peritonitis. In this group there were 329 cases, fifty-six deaths; a mortality of 17.2 per cent. The progressive five-year analysis of these cases shows no improvement in eighteen years.

Group five is acute appendicitis with acute progressive fibrinopurulent peritonitis. In this group there were twenty-five cases and twenty-two deaths, a mortality per cent of eighty-eight. There were thirteen cases in the first nine years with eleven deaths; in the second nine years there were twelve cases with eleven deaths, showing the results in the latter years are not so good as in the previous.

"The total mortality rate from acute appendicitis at the Presbyterian Hospital from 1916 to 1933, inclusive is 5.08 per cent, or 135 deaths in 2,653 cases."

Coming Meetings

STATE

Oct. 23-25—Oklahoma City Clinical. Sheraton-Biltmore Hotel, Oklahoma City.

REGIONAL

July 12-13—Rocky Mountain Cancer Conference, Denver, Colorado.

NATIONAL

June 12-14—American Neurological Association. Hotel Claridge, Atlantic City.

June 22-23—American Rheumatism Association. Hotel Roosevelt, New York City.

June 22-26—American College of Chest Physicians. Hotel Commodore, New York City.

June 25-30—American Medical Association Annual Meeting, New York City.

June 24-25—American Diabetes Association, Inc., Commodore Hotel, New York City.

November 4-5—County Medical Society Conference on Disaster Medical Care, Palmer House, Chicago, Illinois.

PHYSICIAN PLACEMENT

Anesthesiology

Richard S. Dillman, M.D., 529 Fifth Street, Ann Arbor, Michigan; age 35; married; University of Michigan, 1956; board eligible.

General Practice

Conrad Markert, M.D., Hillcrest Medical Center, Tulsa; age 31; married; University of Oklahoma, 1960; available July 1, 1961.

Leonard W. Rozin, M.D., 2740 N.W. 21st St., Oklahoma City; age 33; married; University of Kansas, 1959; now completing general practice residency at University Hospital; desires association in Oklahoma City; available July 1, 1961.

Irving Teague Staley, M.D., 4207 Givens Avenue, Memphis 17, Tennessee; age 32; married; University of Tennessee, 1960; available July 1, 1961.

Joe Allen Stewart, M.D., Box 337, Fountain Inn, South Carolina; age 36; married; University of Oklahoma, 1949; available immediately.

Floyd E. Webb, Jr., M.D., 2527 Webster Drive, Alexandria, Louisiana; age 27; married; University of Oklahoma, 1957; available August, 1961.

E.E.N.T.

August L. Stemmer, M.D., 20th Station Hospital, APO 696, New York, N.Y.; age 32; married; Harvard Medical School, 1953; board certified; Available May 1, 1961.

Industrial

Frederic O. Epp, M.D., 110 West 6th, Augusta, Kansas; age 54; married; University of Kansas, 1938; desires industrial or governmental work; available immediately.

Alexander I. Sandecki, M.D., 115 Dunwood Lane, Route 1, Box 101-E, Joppa, Maryland; age 49; single; Linow University Medical School, Poland; available immediately.

Internal Medicine

Spencer E. Berry, M.D., 13630 Flynn, Le Puente, California; single; University of Oklahoma, 1950; board eligible; available now.

James Stanford Haimsohn, M.D., 3340 Poplar Avenue, Memphis, Tennessee; age 43; married; University of Tennessee, 1942; board certified; available 90 days.

Donald Sinton Hall, M.D., 8283 Marlow, Detroit 28, Michigan; age 33; married; University of Cincinnati, 1955; available August, 1961.

Allen Bert Malnak, 1015½ Brown Street, Evanston, Illinois; age, 32; married; University of Illinois, 1954; board eligible; available June or July, 1961.

Locum Tenens

University of Oklahoma graduate desires locum tenum during the months of August or September, 1961. Contact R. A. Yeakley, M.D., c/o St. John's Hospital, 1923 South Utica Avenue, Tulsa, Oklahoma.

Obstetrics and Gynecology

Philip Tabor Bennett, M.D., Quarters 739A, Maxwell A.F.B., Montgomery, Alabama; age 31; married; University of Texas Medical School, 1954; board eligible; available July 1961.

Richard W. Fenaughty, M.D., 95 Hart Street, New Britain, Connecticut; age 31; married; State University of New York, 1957; available July 1961.

Michael Lado, M.D., 999 Monroe Ave, Apt. 707, Memphis, Tennessee; age 31, married; University of Pittsburgh, 1955; available July, 1961.

Robert B. Williams, M.D., 27 Normandy Road, Auburndale 66, Massachusetts; married; age 30; Tulane University, 1955; board certified; available July 1, 1961.

Orthopedics

Sheldon Roger, M.D., 1185 Holly Street, Denver, Colorado; age 31; married; Indiana University, 1953; board eligible; available July 1, 1961.

George Walter Shaw, M.D., 6135 Walmer, Mission, Kansas; age 32; University of Texas, Southwestern Medical School, 1953; available, December, 1961.

Emmet J. Thorpe, M.D., 6811 Stockton Drive, Knoxville, Tennessee; age 32; married; George Washington University School of Medicine, 1951; board certified; available immediately.

Perry Merrill White, Jr., M.D., 3338 Tanglewood Drive, Augusta, Georgia; age 35; married; Baylor University College of Medicine, 1953; board eligible; available August, 1961.

Psychiatry

William L. Sherman, Jr., M.D., 201 East Kirby, Detroit 2, Michigan; age 38; single; Wayne State University College of Medicine, 1947; board eligible; available immediately.

Mary Eichhorn, M.D., 501 Fourth Street, Garden City, Kansas; age 38; single; University of Kansas, 1945; board certified; available immediately.

Preventive Medicine

Robert E. Jewett, M.D., 2820 Fairway Drive, Birmingham, Alabama; age 52; widower; Indiana University, 1934; board certified; desires administrative practice; available immediately.

Radiology

Quentin T. Brooks, M.D., 6922 Edgemoor Drive, Houston, Texas; age 40; married; Oklahoma University School of Medicine, 1953; board certified; available immediately.

Fred T. Hargrove, M.D., 217 North Pinewood Drive, Carthage, Texas; age 56; married; University of Oklahoma School of Medicine, 1934; board certified; available January 1, 1961.

Edward M. Sipple, M.D., 5935 Chinquapin Parkway, Baltimore 12, Maryland; age 40; married; University of Maryland, 1951; board eligible; available July 1, 1961.

Surgery

David S. Bachman, M.D., 301 North 2nd St., Allentown, Pennsylvania; age 38; married; University of Buffalo, 1947; board certified general surgery; specilaty, broncho-esophagology and thoracic surgery; available immediately.

MISCELLANEOUS ADVERTISEMENTS

VACANCIES—1 General Surgeon, 1 Internist and 1 Admitting Physician for 390 bed Veterans Administration Hospital; Board Certified or Board eligible preferred for surgeon and internist; prefer Oklahoma licensure; salary range $7,560 to $15,030 depending upon qualifications; plus 15% additional if Board Certified, not to exceed $17,200; fringe benefits; citizenship required; preceptorship in General Surgery available. Write: Manager, Veterans Administration Hospital, Muskogee, Oklahoma.

PEDIATRIC RESIDENCY VACANCY at first year. Fully approved program in new two million dollar Children's Hospital in teaching medical center with University affiliation. State law requires U.S. citizenship and Oklahoma license (application could be made anytime). Stipend of $200 with full maintenance. Address inquiries to Leon Horowitz, M.D., care of Office of Graduate Education, Hillcrest Medical Center, Tulsa 20, Oklahoma.

WANTED: Internist to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

GENERAL PRACTICE, age 29; three years experience; military service completed; Oklahoma University School of Medicine graduate; married and have children; AAGP. Desires to locate with a small group or with another man, in town of 5,000 or larger. Available immediately; would also consider solo practice. Contact Key C, c/o Oklahoma State Medical Association.

WANTED: Physician to join Clinic and Hospital Staff at Clinton-Sherman Air Force Base. Contact Col. S. A. O'Brian, 857th Medical Group, Clinton-Sherman AFB, Oklahoma. Phone Clinton, Oklahoma FA 3-2010, Ext. 326.

COMPLETELY EQUIPPED Office Space, 318 N.W. 13th Street, Oklahoma City. Rent—Lease or Sell equipment. Part time, if desired. Excellent secretarial assistant with E.C.G. and X-ray experience. Phil White, M.D., CE 5-7676.

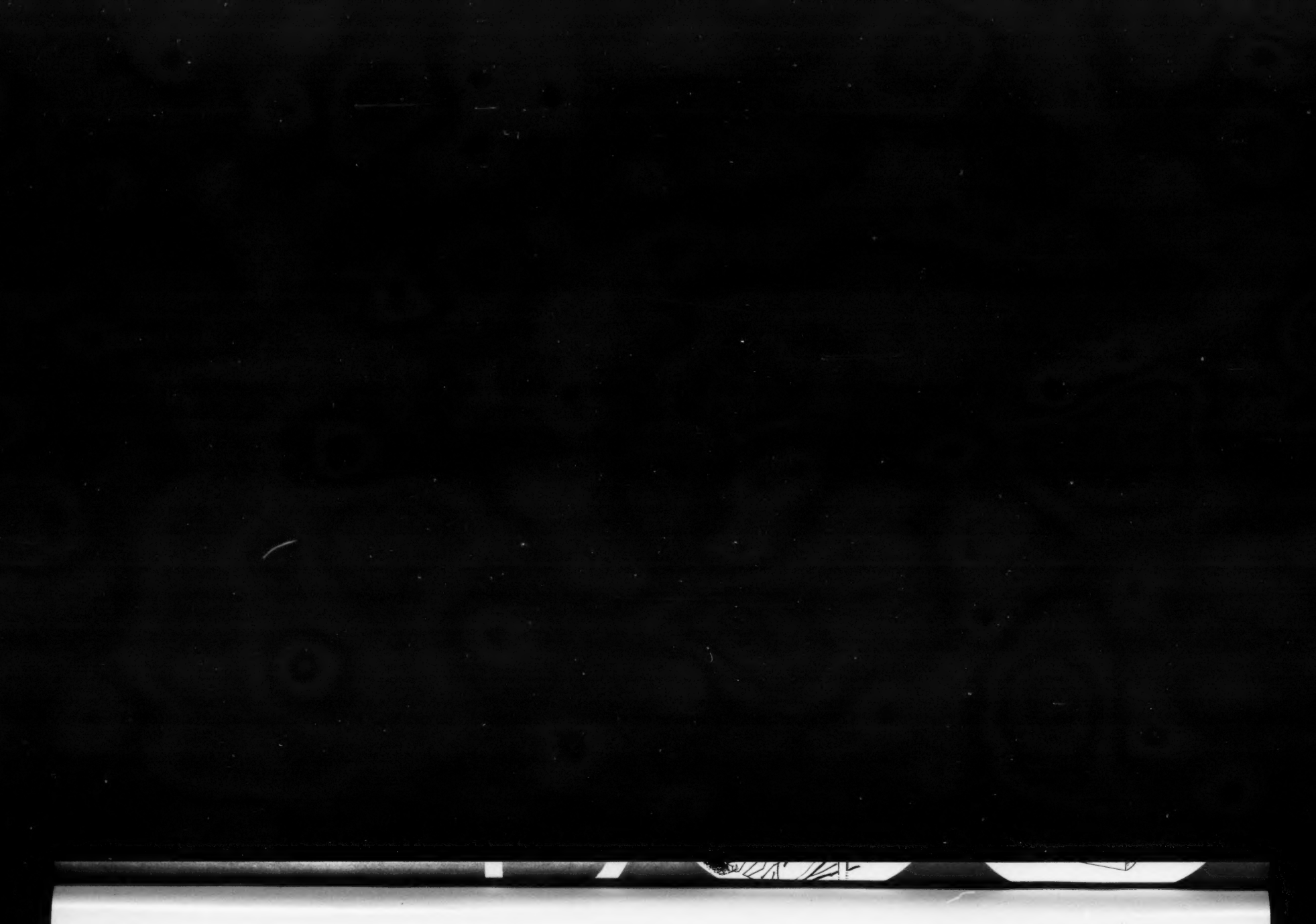
PATHOLOGY RESIDENCIES AVAILABLE, fully approved 4 years (PA-CP). 700 bed hospital. 250 autopsies, 8,000 surgicals, 250,000 clinical laboratory tests. Staff of three full-time board certified pathologists. Full time bacteriologist. Full time Director of Medical Education. Radioisotope laboratory. Electron microscope available. Full maintenance (room and board) plus stipend from $200 monthly on. Apply Leo Lowbeer, M.D., Hillcrest Medical Center, Tulsa 20, Oklahoma.

WANTED: Surgeon to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

HOUSE PHYSICIANS NEEDED immediately for Tulsa's new St. Francis Hospital. Contact Key B, The Journal of the Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma, for further information.

FOR SALE: Instruments and office equipment. Contact C. O. Epley, M.D., 1200 North Walker, Oklahoma City, Oklahoma.

FOR SALE: Good used equipment. C. P. Taylor, M.D., 1201 East 5th, Ada, Oklahoma. FE 2-4424.

OPPORTUNITY for general practitioner in Maud, Oklahoma, population of 1,400 and 6,000 in area. Located 15 miles from Seminole Hospital and 18 miles from new Pottawatomie County Hospital with good roads to each. Town was previously staffed by two physicians. Offices and utilities are free. Contact R. M. Snelson, Phone 443 or 208, P.O. Box 1277, Maud, Oklahoma.

PHYSICIAN WANTED: Laverne, Oklahoma, population 2,000, plans to build a new hospital in the near future. No practicing M.D.s in town at present. Contact Wayne Carlisle, Carlisle Drug, Laverne.